

South African Medical Journal

Organ of the Medical Association of South Africa



S.-A. Tydskrif vir Geneeskunde

Vakblad van die Mediese Vereniging van Suid-Afrika

Incorporating the South African Medical Record and the Medical Journal of South Africa

REGISTERED AT THE GENERAL POST OFFICE AS A NEWSPAPER

Vol. 26, No. 10

Cape Town, 8 March 1952

Weekly 2s 6d

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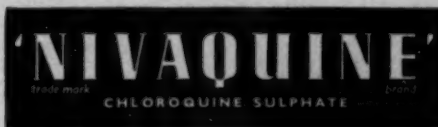
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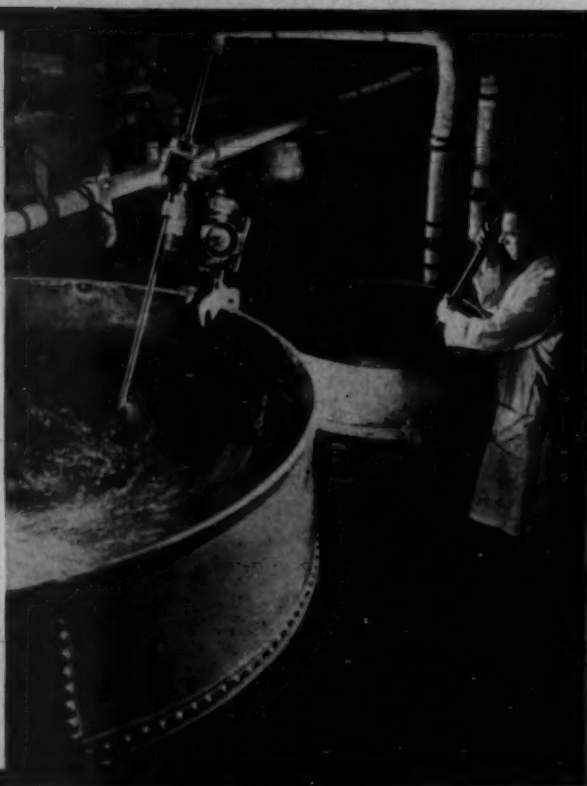


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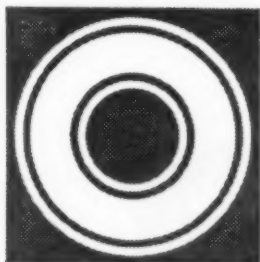
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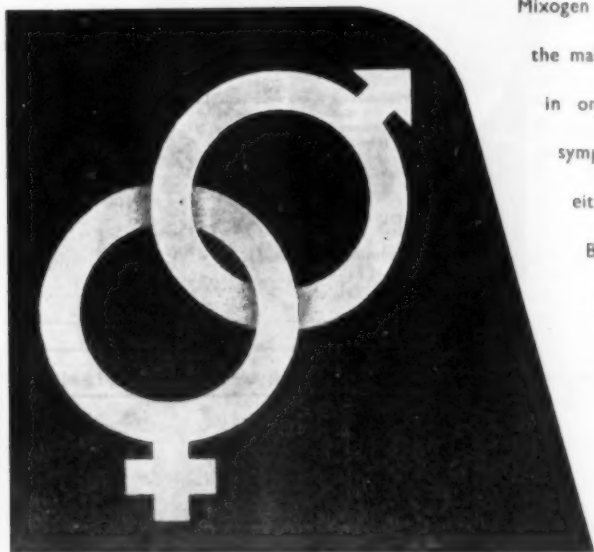
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P.O. Box 643, Cape Town

Posbus 643, Kaapstad

Vol. 26, No. 10

Cape Town, 8 March 1952

Weekly 2s 6d

ESSENTIAL HYPERTENSION

A FIVE-YEAR FOLLOW-UP OF OPERATED CASES

A. LEE MCGREGOR, F.R.C.S. (ENG.), M.Ch. (EDIN.)

Johannesburg

(Concluded from p. 161)

It is apparent from the results in Table I that groups 4 and 5 are in general not suitable for surgery. Exceptions undoubtedly occur. In the series here reported the Smithwick tape measure gives the following readings:

Group 1	— 35 cases	92%
Group 2	— 5 cases	
Group 3	— 9 cases	
Group 4	— 2 cases	8%
Group 5	— 2 cases	

A consideration of the 4 cases falling into groups 4 and 5 shows:

Hypertension Case No. 70. Mrs. K., aged 43, was referred by Dr. P. Bayer in September 1945. Main symptoms: headache and giddiness for 7 years. Her mother died of hypertension aged 54.

Average lying pressure 201/144 mm. Hg. Heart enlarged. P.S.P. 5% in 15 minutes. Blood urea 40 mg. per 100 c.c.

Numerical grading: enlarged heart = 1. P.S.P. 5% in 15 minutes = 3, nitrogen retention = 4. Total = 8 = group 5. Check done 30 months after operation:

Average lying pressure:—Pre-operative: 201/144 mm. Hg.; Post-operative: 187/140 mm. Hg.

This patient replies to questionnaire 5 years after operation: The operation has been successful, she is stronger, has no headache and generally feels well. She can do her exacting work and considers the operations have been worth the suffering and expense entailed.

Hypertension Case No. 87. Col. L., aged 46, was referred by Col. Agranat, Craib and Suzman. This case was reported in the Brit. J. Surg., 1948, p. 283 as follows:

A British Army Colonel had suffered for many years from headaches which periodically attained extreme severity. He had become increasingly irritable. He was on service in the campaigns in North Africa. His condition became steadily worse until ultimately he was hospitalized suffering from congestive cardiac failure of a severe grade. He continued in hospital for months in this state. When the congestive failure had improved sufficiently he was referred for consideration for surgery. His physicians felt that the prognosis without operation was grave in the extreme, and the patient, a man of culture and high mental attainment, stated that he preferred shooting himself to continue living in a state where he could not get out of bed without precipitating cardiac failure.

The findings at this time were cardiac enlargement (heart: chest ratio 7:12). Eye grounds showed Grade I changes. The kidney excretory function was only fair, the blood urea being around 50 mg. per 100 c.c. There were no casts, but there was albumin in the urine.

The average lying blood pressure was 176/120 mm. Hg. The sedation test result was 168/110 mm. Hg.

The picture was most unattractive and the tests showed that little if any benefit in the blood pressure could be hoped for

from operation. As the patient was a medical man and in desperate plight, well able himself to appreciate the risks and issues involved, operation was carried out in November and December 1945. During the first stage no pulse was anywhere detectable before the incision was made. Tilting the table away from the heart produced some improvement. The second stage was uneventful. A year after operation the patient returned for re-check. He felt well, had put on 60 lb. in weight, and was able to walk for miles. He had even gone hunting and was engaged in farming.

The heart: chest ratio was 5½:12½. The electrocardiogram was normal. The renal excretion tests were better, but the blood urea remained about the same.

	Pre-operative	1 year after Operation
Average lying pressure	176/120 mm. Hg.	146/114 mm. Hg.
Sedation test	168/110 mm. Hg.	140/80 mm. Hg.
Type	I	I

This case shows a Group 4 result—one which Smithwick considers as not worthwhile in terms of the fall in blood pressure, yet the change in this man was remarkable—from a querulous invalid, he was restored to good health with reversal of the cardiac changes.

Applying numerical grading—congestive cardiac failure, 1; electrocardiographic changes, 1; enlarged heart, 1; poor sedation, 1; nitrogen retention, 4 = 8 = group 4.

The replies of this trained and experienced medical specialist to the questionnaire 5 years after surgery are so analytical and important that they are given in full:

Question 1: Have your operations been

- (a) very successful,
- (b) successful,
- (c) unsuccessful.

Answer. Very successful.

Question 2: How do you feel now compared with your condition before operation?

Answer. Before operation I was on the point of death and would have died in a matter of weeks had I not submitted to operation. I was quite helpless and it is doubtful if I could ever have risen from my bed unaided. I was tormented with headaches and cardiac pain. Now within reason I can do all I want to do. I am fit and well provided I take care not to overexert, not to overdrink or oversmoke. I am tending to put on weight.

Question 3: Are you able to do the work you did before operation?

Answer. Not quite. I have to limit my professional work and all activities because I tend to breathlessness, headaches, palpitations and pain in the back if I am not careful.

Question 4: Have you any headache?

Answer. Rarely and then only after overexertion or some other cause that would have caused headache in my pre-operation days.

Question 5: Have you any symptoms to-day due to blood pressure?

Answer. I think not. I think my present-day symptoms are due to the damage done before operation. My systolic blood pressure is above normal (only slightly I am told—I have no wish to know what it is) and my diastolic has come down since the operation, but since then the systolic has been much about the same whilst the diastolic has come down further.

My symptoms of occasional headache, frequent backache (it will come on sometimes without overexertion, especially in cold and damp weather) dizziness occasionally, pain over the heart, and limitation of exertion can all be due to cardiac disability—except for the backaches.

Question 6: If so, what are they?

Answer. See above.

Question 7: Have the operations been worth the suffering and the expense entailed?

Answer. Yes. I have had 5 years of life which has not been unduly handicapped by my symptoms. I do not anticipate very many more as my daily periods of 'wellness' are getting shorter.

I would say this, that I do not think the operation is one for people who are lacking in determination and I can see that it would be very easy to fall into a condition of invalidity for life. Similarly the early depression—lasting for six months or more after operation is a serious thing—I doubt if middle-aged women could 'take it'.

Comment. Two years ago a prolapsed nucleus pulposus was removed and the operation was well tolerated. But for the fact that the patient, a doctor, insisted on operation for hypertension, these operations would not have been done. To-day likewise surgery would be refused in a comparable case. Has operation been worthwhile? The facts given speak for themselves.

Hypertension Case No. 193. Mr. W., aged 45, was referred by Drs. Bromlow-Downing, Weir and Craib of Port Elizabeth, and was seen in 1947. He complained of nocturnal dyspnoea, with spitting of pink sputum, tiredness, headaches, increasing irritability. The average lying pressure was 230/142 mm. Hg. Numerical grading: Attacks of left ventricular failure, 2; P.S.P. below 60% in 2 hours (actual result 50%); 1; poor sedation, 1 = 4 = group 5 (resting diastolic pressure above 140). No re-check possible. Reply to questionnaire 3 years after operation: Operation successful. He still gets attacks of nocturnal 'cardiac asthma'. Cannot work as he did. Has some headache. Still has symptoms. Considers the operation was worthwhile.

Comment. The case would to-day be excluded from surgery.

Hypertension Case No. 117. Mr. S., aged 53, was referred by Drs. Goldberg of Germiston and Koenig of Johannesburg. When first seen in 1946 he suffered from angina, headache and giddiness. In October 1947 suffered from a hemiplegia without loss of consciousness. The average lying pressure was 207/95 mm. Hg. The eyes were grade 3, the heart was enlarged and showed electrocardiographic changes, the P.S.P. showed 10% secretion in 15 minutes and 50% in 2 hours. The blood urea was 45 mgm.%.

Numerical grading: enlarged heart, 1; E.C.G. changes, 1; history of stroke without residua, 1; poor P.S.P., 1; nitrogen retention, 4 = 8 = group 4.

Three years after operation the patient replies to questionnaire: Operation very successful. Feels 100% by comparison with condition before operation, can work normally, had no headache or other symptoms and considers the operation was worth the suffering and expense entailed.

Comment. This man is a different person following operation.

It is interesting now to consider the 3 cases which considered that operation had not been successful:

Hypertension Case No. 164. Mr. R., military pensioner aged 31, has had a lot of ureteric trouble for which renal vessels have been stripped (sympathectomised). He complains chiefly of severe headaches and giddiness with distorted vision. Average lying pressure, 157/116 mm. Hg. Sedation 158/100 mm. Hg., P.S.P. below 60% in 2 hours. Numerical grading 2, group 1; 3½ years after operation, average lying pressure 168/108 mm. Hg.

Replies to questionnaire: Operation unsuccessful. Still has headaches though less severe. Has periods of fitness which he thinks will lengthen.

Hypertension Case No. 178. Mrs. M., aged 50, was referred by Dr. Kestell in 1947. She complained mainly of praecordial pain, tiredness and indescribable feelings in her head. Has become depressed and melancholic. Average lying pressure 196/111 mm. Hg. Numerical grading: age, 1; enlarged heart, 1; electrocardiographic changes, 1; P.S.P. below 20% in 15 minutes, 2 = 5 = group 4; 40 months after operation the patient answers questionnaire: operation unsuccessful, blood pressure symptoms unchanged, operation not worth suffering and expense entailed.

Comment. The melancholia would to-day preclude the case from surgery.

Hypertension Case No. 132. Mrs. B., aged 35, was referred by Dr. Croude of Pietermaritzburg. Main symptoms: tiredness and headache. Average resting pressure, 176/119 mm. Hg. Numerical grading 0, group 1; 4½ years after operation replies: operation successful. Feels better than for 10 years. Gets much less headache. The operation would have been well worth the expense entailed had she been better off. It was well worth the suffering.

Comment. This case has been classed as a failure. It does bring out the importance of the expense involved.

The cases cited go to show that the numerical grading of patients is not an absolute criterion for or against surgery, neither is it intended as such. It is a general guide but, like the use of Penicillin, it does not absolve the clinician from the need to assess each case on its merits and to arrive at a decision after proper weighing of all the numerous factors involved. There is no aspect of surgery in which successful treatment hinges more on experience and team work than in determining the place of surgery in the treatment of hypertension.

With the passage of time and the increasing experience and knowledge thus gained it is correct to say that surgery has an established place in the treatment of high blood pressure and that the indications for its exhibition are becoming more exact and clearly defined.

DISCUSSION

In a combined hospital and private series of cases extending to 250, some 500 actual operations have been done. With increasing experience there have evolved certain impressions which have altered or modified practice. It is helpful to discuss these:

The Type of Case Referred for Surgery. The average age of patients operated on was 42.45 years. In most cases the hypertension was of many years' standing. In the great majority of cases patients were of the heavy, overweight, thick-set build. Classified in Smithwick's types there were in the 53 follow-up cases:—

- 15 cases of type I (Pulse pressure less than half diastolic pressure).
- 23 cases of type II (Pulse pressure more than half the diastolic pressure but less than half diastolic + 19).
- 14 cases of type III (Pulse pressure greater than half the diastolic + 19).

In the entire series of 140 cases operated on up to the end of 1950 there were 5 cases in which the resting diastolic pressure before operation was 90 or below. Smithwick makes the all-important statement that for all practical purposes a diastolic which falls to this figure during 48 hours bed rest implies that there is no cardiovascular damage as yet. If the pressure is above the figure, then such damage has occurred. He states further

that the transient hypertensive of to-day is the persistent hypertensive of the future.

Once cardiovascular changes have begun the condition is progressive and of grave prognostic significance. The assumption, therefore, that transient hypertension is a benign disorder is utterly at variance with the facts. Before the development of cardiovascular damage the hypertension is much more likely to be reversible. If surgery is to achieve greater success in the treatment of this disorder, it behoves the physician to be aware of the life history of hypertension, so that suitable cases are referred for operation before the condition becomes irreversible.

There have been several cases in this study where patients have died from cerebral episodes or cardiac failure in the week or two during which they were awaiting operation.

Increasing Knowledge of the Operative Procedure. The Smithwick operation of thoraco-lumbar ganglionectomy plus splanchnicectomy has been used as the routine procedure (except in such cases as required a transthoracic approach) because it is the operation of choice. Several modifications have been introduced:—

(a) The right side is done first so that at the more exacting second stage the patient does not lie on and embarrass the heart when the table is tilted from the surgeon.

(b) No bone is removed. The 12th rib is swung down and the 11th rib up during the dissection and the ribs are sutured in place at the termination of the operation. The team is of opinion that there is less pain following this technique and the chest wall is certainly stronger.

(c) It has been found possible in most cases by finger stripping and the use of graduated traction to avulse the whole great splanchnic nerve even though the ganglionectomy does not reach higher than T 8 or 9.

(d) Large lymph ducts are in the operation field. The surgeon should be on the alert for their presence. In one case the thoracic duct was torn and ligated with no untoward sequela. In one case the duct was seen and avoided. In several cases in the left below diaphragm dissection lymph flowed into the operation field. The leaking orifice was tied when seen. If not found no trouble was taken in searching for the leak. There were no sequelae. In a ganglionectomy not in this series the receptaculum chyli was lacerated. It was removed after ligation of all communicating vessels. There was no sequela. It is accepted, therefore, that injury to large lymph ducts is unimportant, provided the leak is recognized and closed.

ADVANCES IN ANATOMY AND PHYSIOLOGY

(a) *Anatomy: The First Lumbar Ganglion.* This important structure is the key ganglion in operations for hypertension and those on the lumbar chain of ganglia. Atlas¹ states 'because of erratic fusion of lumbar sympathetic tissue, it is impossible to designate lumbar ganglia on a numerical basis with any degree of accuracy. In this series of 140 operated cases in which particular regard was given to the matter, the first lumbar ganglion was situated above the diaphragm in 5 (3.7%) cases. In each of these cases the first lumbar ganglion was above

the diaphragm on one side only. Thus in 280 operations this ganglion was above diaphragm in 1.8% of cases. This means that the ganglion is related to the under surface of the diaphragm in 98.2% of cases. When the first lumbar ganglion is above the diaphragm it is immediately above it and a considerable distance from the 12th thoracic (1½ inches). The surgical significance of this fact is dealt with later. The sympathetic connection between the 12th thoracic and first lumbar ganglia is normally as thick as a strand of catgut. It enters the abdomen usually by piercing the crus of the diaphragm; alternatively it may pass beneath the medial arcuate ligament. At its passage it is very firmly bound to the vertebra by a strong tendinous bridge which must be cut with scissors and can only exceptionally be teased away. Here it lies in close proximity to a large lumbar vein, being anterior to the vessel. This connecting nerve enters the upper pole of the first lumbar ganglion, which lies on or distal to the crus, being often partly incorporated in it by the rami communicantes which bind it firmly in position.

Many nerve fibres leave the ganglion to:

- (a) The coeliac plexus;
- (b) The renal plexus;
- (c) The lumbar splanchnic nerves to the viscera;
- (d) The superior hypogastric plexus.

The ganglion is thus an important junctional area. It is an elongated structure ½-1 inch in length; it looks larger than it is as the nerves entering or leaving are incorporated in it and when they are separated and cut the ganglion is much smaller. When exceptionally large it represents a fusion of the first and second lumbar ganglia. In every case but one in this series the lumbar trunk lay anterior to the lumbar vessels. When the trunk is not readily found, these vessels form an important guide to it.

From the description of the anatomy of the first lumbar ganglion and what has been said of its relation to the surgery of hypertension together with the part it plays in the sexual functions of the male the following deductions can be made:

i. The anatomical custom of positioning lumbar ganglia on the cadaver in relation to vertebral bodies after removal of the diaphragm is not of surgical value. The relation of the first lumbar ganglion is to *diaphragm*. Its vertebral level is of interest in regard to percutaneous injections of the ganglion but has little operative significance as it is much simpler to look for the structure where the crus joins the column than to make a laborious count of vertebrae which is difficult in any case because of the local anatomy, e.g. presence of vena cava on the column. It must be borne in mind that the bodies of the first and second lumbar vertebrae lie mainly above crura, in the thoracic and not in the abdominal cavity.

ii. In following up the sympathetic from below several nerves leave the upper pole of the first lumbar ganglion. The most medial of these is the sympathetic trunk. The two lateral nerves are the rami communicantes and they are often larger than the trunk itself in this situation.

iii. This ganglion is significant in hypertensive surgery. It is usually removed and the neurectomy does not routinely extend more distally for fear of inducing disabling postural hypotension. In cases of marked postural hypertension the operation may be extended to include lumbar 2 and 3. In

cases where the function of ejaculation is to be retained, the first lumbar ganglion is preserved on one or both sides.

For all these reasons the surgeon must be able to recognize this important structure. In cases where a lumbar ganglion is present above the diaphragm it, together with the first ganglion below the diaphragm, should be removed as it may not be possible to tell whether the upper ganglion is the first lumbar or merely accessory.

iv. In lower limb conditions requiring ganglionectomy the numbers of the ganglia are located by tracing the trunk up to its entrance to the diaphragm and following it through diaphragm for 1 inch to discover whether the rare lumbar ganglion above the diaphragm exists and removing it if indicated. If no ganglion is found within an inch above the lower surface of the diaphragm then the first ganglion below the diaphragm is L 1. This ganglion is vasoconstrictor to the lower limb down to the knee and usually requires removal in sympathetic denervation of the inferior extremity. In hyperhidrosis its removal is unnecessary as the leg and foot are deprived of sudomotor nerves by removing L2 and 3. This is important as hyperhidrosis is a disorder of young people. Ejaculation is thus retained.

v. For all these reasons, then, the first lumbar ganglion is the crucial one in the sympathetic surgery of hypertension, the abdomen and the lower limbs. It is the first ganglion below the diaphragm in all but 1.8% of operations.

vi. The rami communicantes of the first lumbar ganglion have a course and direction and length which renders their recognition easy. Between ganglion thoracic 12 which lies 1½ inches above the crus and ganglion L 1 which lies below the crus, the sympathetic trunk of the lateral chain passes down with a medial deflection as the lumbar chain lies on the vertebral column whereas the thoracic chain lies lateral to it on the heads of the ribs.

The two rami communicantes of L 1 appear below the inner end of the 12th rib and arch inwards and down to join the slender connection between ganglia T 12 and L 1. They are 1½-2 inches in length, the longest of all rami communicantes.

These rami should be clipped and cut as far laterally as possible, as indeed should all rami, as Skoog has shown that sympathetic ganglion cells may lie in rami without being obvious. If such are left behind neurectomy may be incomplete and regeneration can more readily occur.

The rami communicantes of T 12 are usually about half the length of those of L 1.

(b) *Physiology: Effects of Sympathetic Denervation:—In regard to viscera.*

i. Just as vagotomy leads to a slowing down of visceral activity so it may be anticipated that sympathectomy would lead to its acceleration. There have been three instances in this series of 140 cases in which gastric ulcer developed following operation for hypertension. In one case severe haematemesis followed during the post-operative phase of the first stage which was done in London.

In another case a large gastric ulcer developed 4 years after operation. Medical treatment was persisted with and the patient died of haemorrhage—a preventable death.

In the third case a gastric ulcer developed three years after operation and was treated by gastrectomy. It must

be concluded, therefore, that visceral denervation is not devoid of danger and should only be undertaken for grave reasons.

ii. *In Regard to the Male Sex Organs.* It has been usual to inform male candidates for surgery for hypertension that following operation the power of ejaculation may be lost but that potency is not as a rule impaired. Several cases in the series remarked on failure of ejaculation or impaired sexual function. In the overwhelming preponderance of cases patients had already had their children and sexual matters were considered unimportant.

Whitelaw and Smithwick⁹ in a paper of great value deal with some 'secondary effects of sympathectomy'. They point out that following the removal of part of the sympathetic system unrelated physiological mechanisms may be affected, and the possible degree of this disturbance is often an important matter in deciding on the scope of the operation. Excessive sweating or Raynaud's phenomenon is sometimes encountered in the non-denervated area following sympathectomy for hypertension. The significance of the work referred to lies in the clear exposition it gives of the complex physiology of male sex function and the explanation of sex disturbances following sympathectomy.

Erection is the result of psychic stimuli together with afferent stimuli from the penis. The latter pass via the internal pudendal nerve to the cord where a lumbar centre for erection may exist. The efferent pathway is via the nervi erigentes. There is dilatation of the arteries to the penis together with engorgement of the veins of the corpora cavernosa. The only part the sympathetic plays in the process is inhibition of vasoconstriction of the arteries to the penis.

Ejaculation: Mechanism. (a) The sympathetic produces contraction of the unstriated muscle of prostate, vesicles and ductus deferens resulting in seminal fluid entering the prostatic urethra.

(b) The parasympathetic (nervi erigentes) causes contraction of the bulbo-cavernosus and ischio-cavernosus muscles, propelling the ejaculate to the exterior.

(c) The emission takes the path of least resistance, i.e. through the urethra, as the tone of the internal or bladder neck sphincter will not allow it to pass into the bladder. This tone is dependent on parasympathetic impulses (nervi erigentes) together with reinforcement mediated by the sympathetic via nerves which pass from the upper lumbar ganglia (mainly the first) through the presacral and hypogastric plexuses to the bladder base.

(d) After ejaculation the sympathetic causes vasoconstriction of the penile arteries thus reducing the blood supply to the organ and flaccidity ensues.

Sympathectomy disturbs these mechanisms as follows:

(a) Removal of upper lumbar ganglia, especially the first, reduces the tone of the internal sphincter of the bladder. The ejaculate finds the path of least resistance which is into the bladder. It is passed with the next urination.

(b) Following removal of portions of the sympathetic system there is increased tone of the remaining part of the system. This could increase the vasoconstrictor tone of the arteries to the penis impairing the efficiency of erection.

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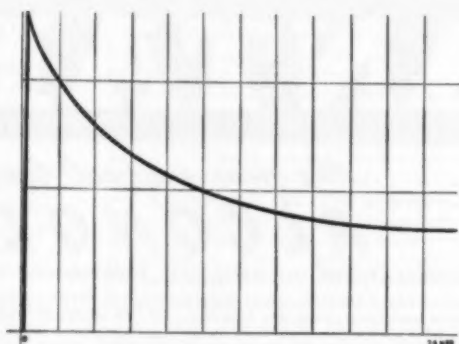
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(c) The pooling of blood in the denervated areas would result in lessening of blood elsewhere and may also impair erection.

(d) When ganglia are removed the parts supplied by them are sensitized to circulating adrenaline. If, therefore, nerves supplying the blood vessels of the pelvic viscera are removed, the vaso-constriction in these vessels may be increased, again causing diminution of blood supply to penis.

These mechanisms explain why sympathectomy above the diaphragm may impair sexual efficiency.

CONCLUSIONS

With few exceptions patients operated on for hypertension and followed up for an average of 3 years expressed themselves as being very pleased with the result.

The indications for surgery in essential hypertension are becoming standardized. The survival period following surgery can be extended by applying the numerical formula of Smithwick in the selection of cases. The operative mortality, under 3% in this series, will be further reduced by such measures.

The first lumbar ganglion is physiologically very important. It should be looked for and orientated in

relation to the crus of the diaphragm and not to vertebrae. Disturbances of male sex function may follow thoracic or lumbar ganglionectomy and operation should be planned so as to minimize these.

The low mortality and relative freedom from complications in this series of cases is due to the indefatigable care of my assistant, Dr. N. C. Leiman, whose ability and devotion to work are beyond praise. So, too, the theatre and ward staff of the Lady Dudley Nursing Home, have earned my sincere gratitude for their skill and proficiency which have made the work possible.

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VAN DIE REDAKSIE

MEDIESE VERENIGING VAN DIE WÊRELD: DIE STOCKHOLM-VERGADERING

Die vyfde byeenkoms van die Algemene Vergadering van die Mediese Vereniging van die Wêreld het plaasgevind in die Parlementsgebou in Stockholm vanaf 17-20 September 1951. Die President, dr. Elmer L. Henderson (V.S.A.), was Voorsitter en die vergadering is deur afgevaardigdes van meeste lande buite die Sowjet-Unie en sy politieke sateliete bygewoon. Daar was ook baie plaasvervangende afgevaardigdes en waarnemers van lede-Nasionale Verenigings sowel as van ander nasionale en internasionale organisasies, waarvan die vernaamste van hulle die internasionale Arbeidskantoor en die Wêreld-Gesondheids-organisasie was. Een van die eerste dinge wat die vergadering gedoen het, was die verkiesing van dr. Dag Knutson van Swede as President van die Wêreldvereniging vir 1951-1952. Die Stockholm-vergadering was derhalwe onder die baie beminlike, inspirerende en bekwame voorsitterskap van dr. Knutson gehou.

Maatskaplike veiligheid en mediese onderrig het die mees vername debat uitgelok. Dit was interessant dat die probleme van maatskaplike veiligheid, soos deur die verskillende afgevaardigdes uiteengesit, nouliks in die verskeie lande in beginsel verskil het. Dit lyk of dit dwarsdeur meeste dele van die wêreld bekend geword het dat die Staat nie sal optree om diepgaande veranderings in daardie mediese dienste, wat 'n integrale deel van die voorsiening van maatskaplike veiligheid vorm, teweeg te bring nie, sonder om eers die mediese professie te raadpleeg nie. In Groot Brittanje is daar ongetwyfeld, in soverre dit algemene praktisyns betref, 'n ongeskrewe ooreenkoms (volgens dr. E. A. Gregg) dat niks gedoen sal word sonder dat die professie daar kennis van dra nie, en in Australië het die Ministerie van Gesondheid onderneem om geen veranderings aan te bring sonder dat die mediese professie geraadpleeg word nie. Dit lyk of Kanada netso tegemoetkomend is.

Dit het ook uit hierdie debat geblyk dat nasionale liggame baie dikwels moeilikheid ondervind om staatkundige liggame wat verantwoordelik is vir die inwerkingstelling van daardie mediese- en gesondheidsdienste wat so 'n belangrike deel van maatskaplike veiligheid vorm, te beïnvloed. Dit was derhalwe waardevol dat verteenwoordigers van die Wêreld-Gesondheidsorganisasie (wat verbind is om hospitaaldienste en maatskaplike veiligheid te oorweeg) in staat was om, op die internasionale peil, aan die debat deel te neem. Dr. Forrest (van die WGO) het die indruk van meeste afgevaardigdes, dat daar meer koördinasie internasionaal as nasionaal bereik is, bevestig; maar dit was op die nasionale peil, in die beplanningstadium, waar medewerking en koördinasie bereik moet

EDITORIAL

WORLD MEDICAL ASSOCIATION: THE STOCKHOLM MEETING

The fifth meeting of the General Assembly of the World Medical Association was held in the Parliament Building in Stockholm from 17-20 September 1951. The President, Dr. Elmer L. Henderson (U.S.A.), was in the Chair and the Assembly was attended by delegates from most countries outside the Soviet Union and its political satellites. There were also many alternate delegates and observers from member National Associations as well as from other national and international organizations, amongst the more important of which were the International Labour Office and the World Health Organization. One of the earliest acts of the Assembly was the election of Dr. Dag Knutson of Sweden as President of the World Medical Association for 1951-1952. The Stockholm meeting was thus conducted under the very amiable, inspiring and capable chairmanship of Dr. Knutson.

Social security and medical education aroused the most instructive debates. It was interesting that the problems of social security, as outlined by the various delegates, hardly differed in principle in the various countries. Throughout most parts of the world it seems to have become recognized that the State will not act to bring about profound changes in those medical services which form an integral part of the provision of social security without first consulting the medical profession. Certainly in Great Britain, in respect of general practitioners, there is a gentleman's agreement (according to Dr. E. A. Gregg) that nothing will be done without the knowledge of the profession, and in Australia the Health Ministry undertook to make no changes without consulting the medical profession. Canada appears equally accommodating.

It also emerged from this debate that very often national bodies had difficulty in influencing the political bodies responsible for the implementation of those medical and health services which form so important a part of social security. It was valuable, therefore, that, at the international level, representatives of the World Health Organization (which is pledged to consider hospital services and social security) were able to participate in the debate. Dr. Forrest (of WHO) confirmed the impression of most delegates that more co-ordination has been achieved internationally than nationally; but it was on the national level in the planning stage that co-operation and co-ordination must be achieved. WHO was ready to assist in any way possible to promote this co-operation on the



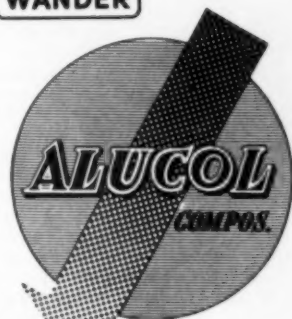
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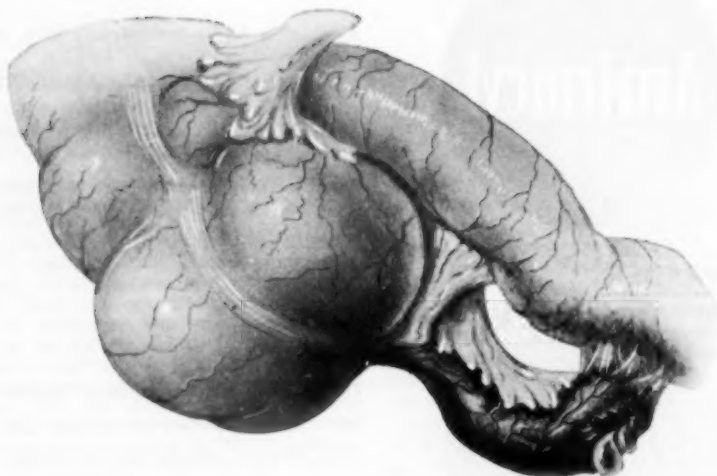
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word. Die WGO was bereid om op enige moontlike manier te help om hierdie medewerking op nasionale peil, waar ons almal mees ernstig geraak word, te bevorder.

Dit wil derhalwe voorkom dat die Mediese Vereniging van die Wêreld, gebore op 'n tydskip wanneer die beleid van Welsynstate sulke diepgaande reperkussies op die lotgevalle van die geneesheer het, 'n baie waardevolle rol mag speel in die behoud van die soorte en standaarde van mediese praktyk wat die goedkeuring van die profesie wegdra. Bowendien het dit 'n mees belangrike funksie om die menings van die profesie self onder die aandaag van staatkundige owerhede te bring.

Die probleme van mediese onderrig het ook 'n baie vrugbare debat aangewakker, wat sulke moeilike onderwerpe aangeraak het soos die keuring van applikante na mediese skole; die neiging van mediese studente en jong geneesherse tot spesialisasie; die behoefte aan nouer samewerking tussen algemene praktisyns en spesialiste; die behoefte vir voortdurende onderrig van die algemene praktisyn, en die behoefte aan 'n algemene oorweging van mediese onderrig op 'n wêreld-wye basis. Aandag was gewy aan 'n Internasionale Konferensie oor Mediese Onderrig, en sommige sprekers het volgehou dat die konferensie beperk behoort te word tot praktiserende geneesherse, aangesien slegs die praktiserende geneesheer die doelmatigheid of swaarte van die mediese praktisyn se onderrig kan bepaal.

Die vergadering was nie slegs begaan oor maatreëls van beleid en hoë beginsel nie. Dit het oorweeg om 'n statistiese studie van kanker te onderneem wat, onder andere waarnemings oor die frekwensie van sekere tipes van kanker in verskillende streke en rasse behels. Dit het ook ondersteuning verleen aan stappe om internasionale ooreenkomste vir die merk van gaslinders te bewerkstellig, en die raad gaan voort om sy kontak met die Internasionale Standaardisasie Organisasie te behou. Probleme van invoerbeheer raak die profesie in baie dele van die wêreld, op dieselfde wyse as in Suid-Afrika, en kadaverprobleme in Indiese Skole vir Anatomie kan 'n sekere mate van oplossing vind langs die lyne van ons eie Anatomie Wet.

Die Vyfde Vergadering het ook gedien as 'n forum vir 'n Wetenskaplike Vergadering waar professor Wallgren entoesiasies gespreek het oor die voorbehoedende behandeling met BCG-entstof in die voorkoming van longtering. Sy menings was nie weersprek nie. Dr. Gunnar Biorck het oor hartbloedvat-siektes uit 'n sosio-mediese standpunt gespreek, en die wetenskaplike afdeling het afgesluit met 'n baie merkwaardige televisiedemonstrasie van hart-chirurgie (valvulotomie) deur Professor C. Crafoord. Aan die einde van die formele besigheid was daar 'n goed bygewoonde Internasionale Vergadering van Mediese Redakteurs onder voorsitterskap van dr. Morris Fishbein, waar opgestelde verhandelinge oorweeg en bespreek is.

Die Stockholm-vergadering het laat blyk dat die Mediese Vereniging van die Wêreld 'n belangrike rol het om te speel in internasionale mediese sake; dit kan die gewig van sy outoriteit verleen om so ook van groot hulp vir nasionale verenigings te wees.

Die Stockholm-vergadering het besonder baie verrig; nogtans het die organisateurs en die Sweedse gasheer (die Sweedse Mediese Vereniging) tyd en energie gevind om by 'n reeds baie vol week 'n uitstekende program van gesellige

national level, which is where we are all affected most acutely.

It seems, therefore, that the World Medical Association, born at a time when the policy of Welfare States is having such profound repercussions on the fate of the physician, may play a most valuable role in preserving the kinds and standards of medical practice of which the profession approves. Moreover, it has a most important function in bringing to the notice of political authorities the views of the profession itself.

The problems of medical education also stimulated a most fruitful debate which touched on such difficult subjects as the selection of applicants to medical schools; the trend of medical students and young doctors towards specialization; the need for closer co-operation between general practitioners and specialists; the need for continued education of the general practitioner and the need for the appraisal of medical education on a world-wide basis. Consideration was given to an International Conference on Medical Education, it being maintained by some speakers that the conference should be restricted to practising doctors, as only the practising doctor can evaluate the strength and weakness of the medical practitioner's education.

The Assembly was not only concerned with measures of policy and high principle. It considered undertaking a statistical study of cancer embodying, *inter alia*, observations on the frequency of certain types of cancer in different regions and races. It also supported steps to establish international agreement for marking gas cylinders, and the Council is continuing its contact with the International Standardization Organization. Problems of import control affect the profession in many parts of the world in the same way as in South Africa, and cadaver problems in Indian Schools of Anatomy could find some solution along the lines of our own Anatomy Act.

The Fifth Assembly also provided the forum for a Scientific Meeting at which Professor Wallgren spoke enthusiastically about the prophylactic treatment of BCG vaccine in the prevention of pulmonary tuberculosis. His views were not contested. Dr. Gunnar Biorck spoke on cardio-vascular diseases from a social-medical viewpoint, and the scientific section wound up with a very striking television demonstration of cardiac surgery (valvulotomy) by Professor C. Crafoord. At the conclusion of the formal business, there was a very well attended International Meeting of Medical Editors under the chairmanship of Dr. Morris Fishbein, when prepared papers were considered and debated.

The Stockholm meeting has made it clear that the World Medical Association has an important role to fulfil in international medical affairs; but it can lend the weight of its authority and thus be of the greatest assistance to national associations as well.

The Stockholm meeting of the World Medical Association was most productive; yet the organizers and the Swedish hosts (the Swedish Medical Association) found

afleiding te voeg wat baie lank in die geheue van al die deelnemers sal bly.

Die Mediese Vereniging van die Wêreld het gedurende sy kort bestaan homself alreeds meer as geregtig. Dit sal by sy volgende vergadering te Athene in Oktober hierdie jaar vordering rapporteer.

time and energy to crowd into an already very full week a most excellent programme of social diversion which was regarded by all participants as most memorable.

The World Medical Association has already more than justified itself in its short history. It will report progress at its next meeting in October this year in Athens.

JAW TUMOURS*

I. MALIGNANT TUMOURS

W. GIRDWOOD, Ch.M., F.R.C.S., F.R.S.E.

Johannesburg

(Continued from p. 152)

DIAGNOSIS AND TREATMENT

Diagnosis of jaw tumours, and especially upper jaw tumours, is difficult. Such a pathological museum can be collected of upper jaw tumours and they present in such a similar manner, that it may be impossible to differentiate between them. Among the common tumours falling into this category are:

1. Osteogenic sarcoma.
2. Carcinoma of the antrum.
3. Adamantinoma.
4. Mixed parotid tumour.
5. Osteo-fibroma.
6. Giant cell tumour.
7. Fibrosarcoma.

Some form of biopsy is usually indicated and whether a diathermy knife is used and a section taken, or an attempt at complete removal followed by a histological section is made, matters little, as in all cases, a surgical approach is essential after exclusion of gumma of the palate.

Windeyer's method²⁶ of treatment of carcinoma of the antrum is well worth following. First, exploration is done, with drainage and diathermy-biopsy. Then over 4-6 weeks, 4,500-5,500 r are given and 3-4 weeks later the palate and alveolus are removed. If the orbital plate is involved, this (as well as the eye, if necessary) is removed and often the lateral nasal wall. The soft palate is left, as speech is thus maintained and the hard palate defect can be covered by an obturator. Any residual growth is coagulated and, further, radium needles can be inserted into the sphenoidal region or, now that good visualization is possible, a radium applicator can be applied. Using the above methods Windeyer gives improved figures from 18.8% to 36.6% 3-year cures.

Combinations of surgery and radiotherapy are sometimes feared by those who handle these cases and in the late cases in which this may be tried, hideous deformities result. A large hole in the face extending back to the vertebral column with recurrent nodules, distortion of the face, neck glands and persistent pain and salivation make it important that, at all events, this should be prevented.

In the Bantu many of the cases fall into the category

of late cases with oedema of the face and infratemporal fossa extensions. Improvement follows on a course of deep therapy, whereafter surgical measures can be contemplated.

The classical incision for radical resection of the maxilla is not satisfactory in these cases, as there is a tendency to failure of healing and breakdown with the unfortunate results previously mentioned. The incision from the angle of the mouth curving down to the inferior border of the mandible and then laterally to the angle of the jaw, is highly satisfactory. The special advantages are the safe cover to the massive antral hole and the wide lateral exposure which is possible. The upper flap is dissected free from underlying bone and tumour to the level of the inferior orbital margin and above the zygomatic arch, and the buccinator muscle, facial nerve branches and the parotid are turned up with this flap. The masseter is treated according to the position of the tumour and its relationship to the tumour. If involved, it is stripped sub-periosteally from the zygomatic arch and mandible and, depending upon the accessibility, resection of portions of the mandibular ascending ramus and zygomatic arch may be necessary.

Technical Procedures to Save Life and Deformity. The danger to life from operation is greatly minimized by attention to haemorrhage at operation, prevention of aspiration of blood at and after operation, prevention of sepsis in the residual cavity and provision of early healing to prevent inhalation of septic material with pulmonary complications.

Ligation of the external carotid artery is not necessary and prolongs the operation. Pressure controls bleeding, but transfusions of 1,000 c.c. of blood are always necessary. Intratracheal anaesthesia with a pack-off is essential. At the end of the operation a pressure pack is necessary and a Stent's composition mould, or any other form of pressure, surrounded by a Thiersch graft, is the procedure of choice. This can be anchored firmly in place by the use of metal cap splints with a bar support attached, or with over-stitching. Deformity is minimized by saving the soft palate if possible. The soft tissues are held in position by the underlying mould and later by a prosthetic appliance.

* The References will be published at the end of the concluding part of this series.

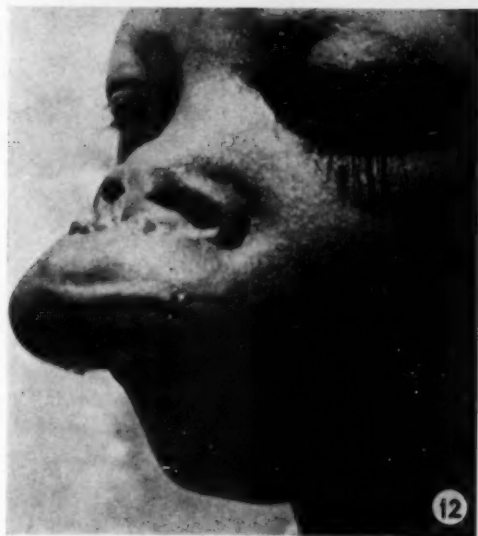
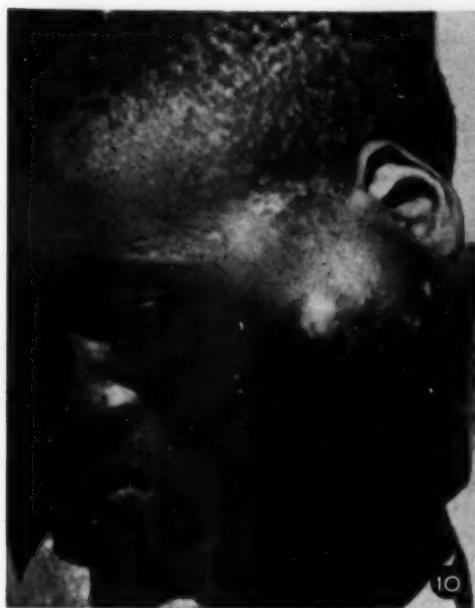


Fig. 10. Malignant paroid tumour.

Fig. 11. Retinoblastoma.

Fig. 12. Haemangio-endothelioma.

4. Conjunctival carcinoma.

5. Retinal retinoblastoma (Fig. 11), etc. including rarities, i.e. haemangio-endothelioma (Fig. 12).

The Rodent Ulcer Problem. In early cases there is little to choose between excision and plastic surgery, and some form of radiotherapy, radium or Chaoul. However, most people would prefer radiotherapy for the convenience of treatment.

The Place of Surgery. Recurrence of single rodent ulceration should indicate the necessity for surgical excision. When cartilage or bone is exposed, radiotherapy is of no avail and some form of surgical excision is necessary.

Illustrative cases are shown in Figs. 13-18.

Factors to be considered in rodent ulcer problem are:

1. Most of the worst cases are in elderly patients.
2. There may be a tendency to multicentric origin and excision of one area may be entirely successful but the tumour will appear somewhere else.
3. Once ulceration exposes cartilage or bone, or there is chronic ulceration in the centre of the scar, no form of X-ray therapy is of avail.
4. Excision and immediate plastic repair is a dangerous principle as covering of areas which have not been proved clear will delay later diagnosis of recurrence. It is better to allow good visualization and to do plastic reconstruc-

Other Soft Tissue Malignant Tumours. In this group there is a large variety of tumours including:

1. Buccal, oral and tongue carcinomata.
2. Parotid tumours (Fig. 10).
3. Malignancy in lymph glands invading bone.



Fig. 13. Late basal cell carcinoma.

Fig. 14. Excision included the internal jugular vein. Excellent immediate result. Deep recurrent nodules appeared 6 months-1 year later. Death 4 years later.



Fig. 15. Late rodent ulcer of the mandibular bone. Exposed excision and plastic reconstruction.

Fig. 16. Immediate success. Recurrence 18 months later.



Fig. 17. Rodent ulcer. Extension to the mastoid cells and the skull.

Fig. 18. Excision of the skull bone. Skin graft on the dura with radical mastoid and pedicle cover to the bare bone. Recurred on the skin outside the grafted areas.

tion at a later date in 12-18 months after complete permanent healing. However, there are times when this principle is not adhered to, especially in less severe and localized lesions of the ear and nose, and in these cases results are quite good.

5. Surgery in late cases is disappointing.

Harmer points out that 'most of these have already received repeated X-ray treatment with terrible disfigurement and suffering. 'Our experience of them' he contends 'is so unfavourable that I think it is doubtful whether a plastic operation to repair the deformity should ever be recommended even if the disease appears to have been eradicated. Although they may survive for long periods, these types must be regarded as hopeless'.

The tendency to recur after wide excision suggests either a multifocal origin in these cases or a growth-promoting substance of a fluid or chemical nature existing outside the cells.

Surgery may occasionally provide a cure, especially in nasal and aural cases. It can provide good skin cover which will withstand further radiotherapy and, after radical excision, can minimize deformity.

Extension of Malignant Tumours to Involve the Mandible. Occasionally in cases of carcinoma of the tongue, or where the carcinoma of the tongue is apparently cured by treatment and secondary submandibular gland involvement has invaded the mandible, a surgeon may be asked to do a radical excision of the glands or involved tissues, plus a resection of portions of

the mandible. This is discouraging surgery, although remarkably satisfactory in the short-term sense. It gives the radiotherapist an opportunity to continue treatment with healthy tissue to work on rather than scar or bone, where efforts to treat by radiotherapy are useless.

Mixed Parotid Tumours. When the mixed parotid tumour is obviously malignant by reason of facial nerve involvement, or by the nature of the rapidly growing tumour, or recurrences or skin involvement, it may be considered necessary to do a radical excision to attempt a cure.

The fact that the facial nerve is to be sacrificed in any case, makes the approach easier than it would be otherwise. However, a modification of the incision and approach, discussed earlier for massive tumours of the jaw, may be used. The zygomatic arch is exposed and resected and the ascending ramus can be demonstrated and resected. The masseter must be removed with the tumour, including the parotid and the facial nerve.

If considerable skin has to be excised at the same time, after closure of oral mucosa there is a large cavity in the infratemporal region. Raw areas can be skin-grafted at the time of primary excision and then a thick flap elevated to fill out the area at a later date.

Carotid Body Tumours: Case Report. Zachariah Muntle, aged 18 years, was admitted on 9 November 1944 with the history of a swelling of the right side of the upper jaw for about 3 months. There was considerable pain. In the last month he had noticed that his eye had become more prominent on the right side. There was a large swelling in the region of the

right maxilla. The cheek was protuberant on that side and this extended to above the zygomatic arch. The lateral nasal mass was bulging inwards to occlude the right nostril. The right eye was elevated and proptosed, with limitation of movements but sight was still present. There was bulging of the palate into the mouth; the maxilla bulged laterally towards the cheek and the swelling extended into the region of the soft palate as well. There were no glands palpable in the neck.

X-ray showed complete opacity of the right maxillary antrum. There was marked destruction of the right maxilla. The appearances were suggestive of a malignant tumour.

The patient was prepared for a biopsy. A wide exposure of the tumour was made by an incision from the angle of the mouth, upwards and outwards to the angle of the jaw. The cheek flap was retracted upwards and the zygomatic arch was resected. The tumour was then seen and it was considered possible to attempt its removal. It was removed from the infratemporal region and the whole of the right maxilla excised with the tumour. To reach the pterygomandibular fossa, resection of the ascending ramus of the mandible was performed, with admirable exposure. The whole of the tumour was removed except for a portion which was adherent to the vertebral column posteriorly and the base of the skull superiorly. The whole of the soft palate on the right side was resected including the mucosa of the naso-pharynx down to the level of the epiglottis.

The enormous raw area then left was filled in by a large Stent's mould fitted carefully into every crevice. A skin graft was laid over this mould and the cheek flap applied to the surface of the mould and sutured. The mould was held in position by the shape of the remaining cavity with a few silk stitches tied over it.

The post-operative course was uneventful. The pain that had so worried the patient disappeared, the Stent's mould was removed after 3 weeks and the patient started to get around the ward. However, some of the tumour could not be removed at operation and it was not surprising that about 4-5 weeks after the operation the patient complained of recurrence of the pain. It was then possible to palpate firm round glands

in the neck in the region of the deep cervical group and the submaxillary glands on the right side. Meanwhile the skin graft had taken well inside the mouth and there was no gross ulceration. The appearance was that of healing everywhere except in the greatest depth of the wound seen through the mouth.

Histological section (7 December 1944) showed that the structure was that of a carotid body tumour.

The unusual nature of this report and the subsequent occurrence of glands in the neck prompted a further biopsy of the glands in the neck. A *histological report* (on 6 February 1945) read: Section of this gland shows infiltration by squamous carcinoma.

An X-ray on 12 January 1945 showed a completely absent ascending ramus of the mandible on the right side. The malar bone and lateral wall of the antrum had also been lost either by removal or by erosion. No active erosion could be seen in the region of the maxilla to suggest any active neoplastic involvement.

Discussion. This case was considered inoperable from the start. However, the value of the exposure recommended and the method of preventing post-operative complications can be appreciated from this case. The value of biopsy was considerable, although both the pathologist and the writer were at a complete loss to describe the occurrence of a carotid body tumour in the maxilla without any tumour in the neck.

SUMMARY

In the upper jaw a host of different pathological conditions can cause tumours. Early surgical interference is essential for diagnosis and treatment. Radical treatment, good exposure and reconstruction are constant problems and, although disappointing in some cases, this line of treatment offers most for these patients.

(To be continued)

VERENIGINGSNUUS : ASSOCIATION NEWS

A SUGGESTION FOR MORE CO-OPERATION AND LESS COMPETITION IN THE MEDICAL PROFESSION*

M. A. ROBERTSON, M.B., B.CHIR., F.R.C.S.

Port Elizabeth

Mr. President, Ladies and Gentlemen: After my term of office as President of the Cape Midlands Branch of the Medical Association (for their support during which, I sincerely thank my colleagues), I feel that it is not inappropriate that I should pass some comments on the rift that is developing between Specialist and General Practitioner.

This is not due to economic necessity—as is so often the case in other professions—but to a diversity of interests (so much so, that the only common topics for all practitioners, judging by the attendances of members at meetings, are medical economics, medical politics and medical dinners).

The segregation of specialist groups, with their own interests, and the infringement of ethics by patients are additional means of estrangement.

Since the public is becoming more ill-health conscious, it is demanding a much higher standard of attention than previously. This trend is likely to continue with the stress and strain of modern life and, as the sphere of medical knowledge is becoming so vast, it is imperative that a scheme for making the best use of medical resources be made by adapting the profession to the demands. At present the public is discriminating between General Practitioner and Specialist, to the detriment of the profession as a whole.

It must be recognized that each is necessary in his own sphere, with the inability of either to replace, or even exist, without the other. Consequently, it is essential to co-operate.

It is unfortunate that the two fields are drawing further apart—the one branching off into spheres requiring more than

medical knowledge, and the other into spheres requiring more detailed medical knowledge.

Moreover, it is likely that this tendency on the part of the public to differentiate between G.P. and Specialist will aggravate the position; for the G.P. obviously cannot increase his knowledge in all spheres, even by attempting to keep up with special medical articles in lay journals. In his role in an advisory capacity to the average family on matters concerning personal and domestic problems, health, hygiene, diet, exercise, children's ailments, neurasthenics, senility, etc., he fulfils the important role of being in direct contact with the public. All this can only be acquired after years of experience in general practice.

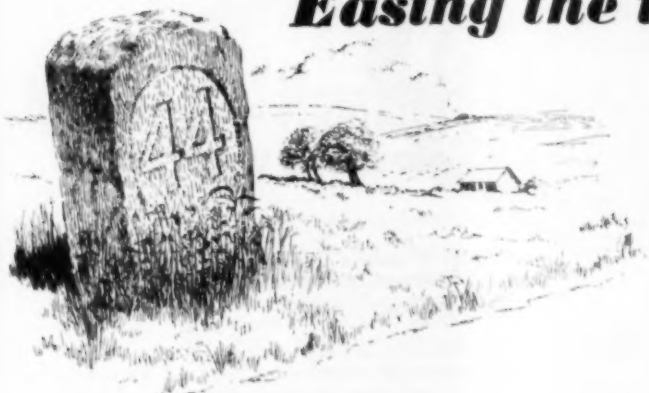
The Specialist is in an even more difficult position. His specialized knowledge is for the benefit of about 20% of patients who, by the time they reach him, have been through medical hands, and have resigned themselves to psychological and economic stress, due to the fact that there is no easy cure in their case. If he attempted to treat the remaining 80%, he would be swamped and unable to cope with the cases efficiently. In any case, it is well known that specialized knowledge, when applied generally, is dangerous and even misleading, however well intentioned; so it would be better to confine himself to his speciality, more in the nature of a technician. This divergence is taking place at a time when the former Consulting Physician, who has always been the link, is disappearing.

There is, however, much common ground between the Specialist General Physician and the experienced G.P. It is to these groups that I look for correlation of efforts of G.P.

* Valedictory address delivered to the Cape Midland Branch.



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Although the adage 'life begins at forty' may be true in theory, it is in practice that we realise that it is not long before the difficult milestone of the menopause is reached. The years of stress may be eased by the timely administration of a preparation designed to counteract the depression, nervous phenomena, and vasomotor disturbances so troublesome to women patients.

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★ **NYXOLAN** is a new, clinically
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COMPOSITION. 'Nyxolan' is a pleasantly tasting syrup containing 0.4% of aluminium 8-hydroxyquinoline sulphate $[\text{Al}(\text{C}_8\text{H}_6\text{ON})_3 \cdot 3\text{H}_2\text{SO}_4]$.

CLINICAL OBSERVATIONS. Significant trials in medical institutions show that 'Nyxolan' is a most reliable anthelmintic when used alone, i.e. without supportive purgation, enemas or anal counter-irritants. Abstracts from literature describing clinical results are available on request.

ADVANTAGES. 'Nyxolan' is not a dye; it is non-arsenical; it does not induce diarrhoea; dietary regimen is not necessary to its successful employment. It is entirely acceptable, even to infants.

INDICATIONS. Present clinical experience with 'Nyxolan' refers to *Oxyuris vermicularis*. Besides its indication in oxyuriasis 'Nyxolan' is the preferred treatment in cases of suspected oxyuriasis, e.g. pruritus, anal eczema, masturbation and genital sensitivity in small girls, "caecal irritation".

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EXCRETION IS SO RAPID that 85 to 100 per cent is recovered from the urine in a period of ten hours². "Thiosulfil" is excreted almost entirely in the free form, only 5 to 10 per cent appearing in the acetylated form. In contrast, the excreted acetylated forms of sulfapyridine are 20 to 40 per cent³, sulfathiazole, up to 20 per cent; and 3,4-dimethyl-5-sulfanilamidoisoxazole, 28 to 35 per cent. Renal clearance is high and is greater with "Thiosulfil" than with other sulfonamides, being only about 10 per cent under creatinine clearance.

"STRIKING ABSENCE OF SIDE-EFFECTS notwithstanding the relatively large dose given to children" is a typical conclusion of clinicians experienced in the use of this drug. This is a conspicuous feature of "Thiosulfil" therapy.

URINARY TRACT INFECTIONS require a high concentration of sulfonamides in the urine. "Thiosulfil" accomplishes this effectively with frequent administration of small doses. Actually, 2½ to 5 grains of "Thiosulfil" five or six times daily is as effective as other sulfonamides at a much higher dosage level⁴. The exceedingly small dosage required keeps the blood concentration very low, greatly minimizing the possibility of renal damage, sensitization, leukopenia, etc.

The sulfa drugs have a much wider bacterial spectrum than the antibiotics, particularly in genito-urinary diseases. In one series of urinary tract infections due to *E. coli*, *Ps. pyocyaneus*, and *S. aureus*, failures were seen only in mixed infections, in the presence of an obstruction, or resistance to sulfonamides as well as the antibiotics. Only 0.6 Gm. daily was given over periods of 3 to 23 days.

TOXICITY: Rapid excretion due to great solubility and low degree of acetylation, together with the small dosage required, account for the striking lack of toxicity and infrequency of side effects. In a large series where "Thiosulfil" was used locally in dermatosis and pyogenic infections over a period of 18 months, it was concluded that the drug is efficient, non-irritating, and non-toxic.

There is always a risk of sensitization in allergic individuals, but, because of the low dosage and rapid elimination of "Thiosulfil", such reactions are not as serious as those frequently observed following other sulfonamide therapy. Of 300 cases followed over a long period, there was no neuritis, hematuria, renal complications, exanthema, icterus, or pyrexia, and no significant changes in hemoglobin concentration or leukocyte count.

DOSAGE: Adults—1 to 2 tablets (0.25 to 0.5 Gm.) 5 or 6 times daily.
Children—½ to 1 tablet (0.125 to 0.25 Gm.) 5 or 6 times daily.

Note: Fluid intake should be limited, and if the patient voids at night an extra tablet should be given. In most cases 5 tablets daily will be sufficient to render the urine sterile in 5 or 6 days.

AVAILABILITY: Each scored tablet contains 0.25 Gm. sulfamethylthiadiazole. Supplied in bottles of 100.

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and specialist technicians, and for liaison between the medical profession, as a whole, and the public. My suggestion is that, as an intermediary, Consulting Practitioners be drawn from these groups. The G.P. alone is unable to fill this role for a number of reasons. His status is declining because of:

(a) Public belief in specialization in all branches of life—vide the numbers in house building, in the army, or the police force, etc. In fact, any skilled worker in a restricted occupation is deemed to be a specialist.

(b) The G.P. newly qualified is not trained for about 80% of the work he meets—his training at medical schools being given by specialists in narrow spheres. The art of G.P. was previously taught by the apprentice system—a system noticeably absent from to-day's medical training.

(c) The subject is too vast to enable him to acquire more than a superficial knowledge.

(d) In his sphere of public contact, he has to differentiate in a very short space of time, and without investigation, between the 80% and the 20% who are organically ill. Should he occasionally fail, he should not be judged too harshly by his colleagues.

Thus he should obviously be protected by having the co-operation of a Consultant who, being an experienced Consultant, will not compete for the patient, nor criticize, but will diplomatically attempt to help both patient and doctor. The General Practitioner would obviously be more ready to refer the difficult case to this Consultant, without loss of prestige, knowing that the patient had no direct access.

The Specialist is also unable to fill the role of intermediary. He does not retain the confidence of the G.P., through being a Specialist with direct access, and is therefore a potential competitor, not dependent upon maintaining the goodwill of the G.P. Also, owing to the nature of his speciality, he must, as soon as he is qualified, start to acquire his specialist knowledge, to the detriment of his general medicine. Thus, he is becoming more unfitted to advise the patient, but more fully qualified to advise a medical man on a particular point in the general picture. This circumscribed specialist would also be protected by such Consultants of more general experience.

Actually, this particular position is not altogether unfamiliar in the large American Clinics, where opinions are correlated by an experienced practitioner before being presented to the patient, so maintaining a more personal relationship. Thus again the Consultant Practitioner (as I have termed him), would, if necessary, also utilize the facilities of a particular Specialist or technician, before referring the case back to the G.P. This system would not encroach on the right of G.P. or patient of direct approach to a Specialist.

The G.P. would thus confine himself to preventative medicine (health, diet, emergency, minor ailments, family adviser and maintaining personal contact) and all illness that he feels he can take the responsibility of treating alone, within his capability and conscientious limitations.

The stimulating effect on the G.P. would be that, by conscientious medical practice (when he arrives at the stage where he would like to do less arduous work—particularly night and emergency calls—and have more time for study or to prepare a hobby for retirement), he could aspire to be a Consulting Practitioner, where his experience would remain an asset to the medical profession, and the patients would be additionally safeguarded by his colleagues' opinion of his consultant ability in referring their cases to him. It may indeed lead to a more ethical attitude in the profession itself, with the thought of the ultimate aim of co-operation of all colleagues. In any case, the G.P. is increasingly unlikely to revert to study in a speciality, as his scope for post-graduate technical facilities will be restricted by the training of young specialists in resident appointments.

As I have indicated, the sphere of medicine is becoming too large for either G.P. or Specialist to follow more than general trends outside his particular groove. The one is too fully occupied with his daily contact with patients, the other in keeping abreast of his particular speciality. There is, consequently, scope for the Consulting Practitioner to be able to fill the position of liaison.

I do not envisage this as a small group. It will grow from the ranks of the experienced G.P. and the General Physician from the present specialist group, although the latter may prefer a more restricted speciality.

There are many experienced practitioners who, given time and opportunity, could contribute a great deal to medicine, and even correlate many recent discoveries.

This proposed consultant group could indeed develop into the spokesman for the profession, in giving a lead to public opinion in the sphere of medical matters, such as hospital administration and health generally, social work, etc. They could, as indicated, also take a share in the training of medical students (to give them a more balanced view for general practice) and in the running of the hospital general wards and out-patients.

In its spare time this group would have more opportunity for contact with the public and should be able to raise the status of the profession as a whole, by taking a more active part in non-medical affairs, and Consultants would have freedom from the risk of being accused, by their colleagues, of advertising. This would enable the profession to take a more prominent part in national direction which, as an educated section of the public, it should do, offering its due share in leadership and advice in public affairs.

The need for medical men will increase as the public is made more ill-health conscious by advertisements, the radio and the Press, etc., and it seems to me that there should be no necessity for competition and much for co-operation.

Indeed, it should not be difficult to find an intermediary to the Specialist who, knowing more and more about less and less, eventually knows everything about nothing, and the General Practitioner who knows less and less about more and more, and eventually knows nothing about everything.

THE CLINICAL APPLICATION OF CORTISONE AND ACTH THERAPY: A REPORT OF 150 CASES *

M. M. SUZMAN, M.D., M.R.C.P.

Dr. Suzman opened his address by briefly recounting his early experiences with ACTH. In July 1949, using the original Organon preparation Corticotrophin, distinct temporary improvement was noted in a patient with acute systemic lupus erythematosus and a prolonged remission was induced in a patient with rheumatoid arthritis, whereas no response was obtained in a patient with acute dermatomyositis. Some months later, using the newer Organon preparation, a dramatic recovery was obtained in a patient with severe acute dermatomyositis.

Early in 1950 a supply of Cortisone was made available for research purposes and this was used in a comprehensive biochemical investigation of a small group of patients with a variety of diseases, including rheumatoid arthritis, gout, leukaemia, Still's disease and acute viral hepatitis with cholaemia.

* An address delivered by Dr. M. M. Suzman at a combined meeting of the Cape Western Branch of the Medical Association and the Cape Town Post-Graduate Medical Association on 23 January 1952.

The results of ACTH and Cortisone therapy in 150 patients, suffering from over 50 different diseases, were presented. Slides were shown to illustrate the detailed therapeutic effects in a small group of cases which included instances of Still's disease, acute dermatomyositis, chronic intractable bronchial asthma, acute leukaemia, thrombocytopenic purpura, acute viral hepatitis and chronic liver cirrhosis.

Dr. Suzman dealt with the indications for the use of these hormones, the choice of preparation and the different methods of administration, stressing the advantages and efficacy of the intravenous route for ACTH in certain circumstances. The untoward side-effects and the hazards which may result from their use were described, and the patho-physiological mechanisms by which these occur were elaborated on, as well as the means to be adopted for their prevention and control.

Dr. Suzman concluded with some general remarks on the newer conceptions of the hormonal control of host responses to tissue irritants and the possible role of the adrenal cortex in the genesis of certain diseases.

OFFICIAL ANNOUNCEMENT : AMPTELIKE AANKONDIGING

MEDICAL AID SOCIETY TARIFF

SOCIETIES NOT LISTED

Members of the Association are reminded that the Tariff of Fees drawn up for use by the Medical Aid Societies is no longer applicable to the Societies listed below, and that their members are, therefore, liable for fees at the customary rates for private patients.

1. Atlantic Refining Company Staff Medical Aid Society.
2. Cape Times Medical Aid Society.
3. Siektfonds van die Nasionale Pers, Beperk (Kantoorpersoneel).
4. Norwich Union Life Insurance Society Staff Medical and Surgical Benefit Scheme.
5. S.A. Teachers Association Medical Aid Society.

L. M. Marchand,

Assistant Medical Secretary.

P.O. Box 643,
Cape Town.

MEDIESE HULPVERENIGING-TARIEF

VERENIGINGS NIE OP DIE LYS NIE

Lede van die Vereniging word daaraan herinner dat die Tarief vir Mediese Hulpverenigings opgestel, nie langer van toepassing is op die Verenigings hieronder vermeld nie, en dat hul lede daarom vir doktersgelde volgens die gebruikelike private tarieweskaal aanspreeklik is.

6. S.A.K.A.V. Sick Benefit Fund.
7. S.A. Mutual Life Assurance Staff Medical Aid Fund.
8. Southern Medical Aid Society.
9. S.A.O.U. Siektfonds.
10. United Banks' Medical Aid Society.
11. Vacuum Medical Aid Society (South Africa).

L. M. Marchand,

Assistent Mediese Sekretaris.

Posbus 643,
Kaapstad.

PASSING EVENTS

Dr. A. H. Tonkin, Medical Secretary, leaves for Calcutta on 11 March to attend the meeting of the Commonwealth Medical Conference. He expects to be back on 28 March.

* * *

Prof. W. Norman Taylor of the Department of Hygiene, S.A. Native College at Fort Hare, has returned from a 7-month visit overseas.

Prof. Taylor visited Jamaica and the United States during the tenure of a World Health Organization Travelling Fellowship.

* * *

Dr. John K. McKechnie has left for overseas to continue post-graduate studies in medicine. He is accompanied by Mrs. McKechnie and they expect to return to the Union in about 18 months' time.

* * *

Dr. H. R. Liebermann of Cape Town has changed his residence telephone number to 6-8719.

* * *

Dr. A. M. Michael, F.R.C.S. (Edin.), M.R.C.O.G., has moved to 216 African Life Buildings, 85 St. George's Street, Cape Town.

Telephones:—Rooms: 3-1490; Residence: 2-5408.

* * *

Dr. Lilian Raftery has changed her address to 404 Piccadilly House, Aliwal Street, Durban. Telephones: 21959 and 45186.

* * *

Dr. J. J. du P. le Roux has been appointed Secretary for Health in succession to Dr. G. W. Gale, who has resigned to take up an appointment as full-time Dean of the new Medical Faculty in Durban.

* * *

The booklet entitled *Hospital Improvements—How to Improve the Daily Life of the Patient in the Ward*, as reviewed in this Journal on 6 October 1951, is obtainable from Maskew Miller Ltd., P.O. Box 396, Cape Town.

WORLD MEDICAL ASSOCIATION

The Nassau Hospital, located at Minneola, New York (about 20 miles from New York City), has offered to take 2 young physicians for a period of one year and give them training in pathology.

All applicants must speak English and must furnish their own transportation to and from the United States. The hospital will provide room, board, laundry and an honorarium of about 50 dollars a month. Applicants should have access to additional funds if needed. No application will be accepted

unless it has the approval of the national Medical Association of the country of the applicant.

Forms of application may be obtained from the Medical Secretary, P.O. Box 643, Cape Town, and on completion should be returned to him together with at least 2 testimonials regarding the character, ability and industry of the applicant.

INTERNATIONAL CONGRESS ON MEDICAL LIBRARIANSHIP

It is proposed to hold an International Congress on Medical Librarianship in London in July 1953. Sir Cecil Wakeley, K.B.E., C.B., President of the Royal College of Surgeons of England, has kindly consented to accept the honorary presidency of the Congress. The programme will include formal sessions for reading and discussion of papers, visits to medical libraries and social functions. It is hoped also to have in connexion with the Congress an exhibition of medical books and periodicals and library equipment. All those actively engaged or interested in medical librarianship throughout the world are invited to participate.

Requests for further information may be addressed in advance to the Honorary Secretary, First International Congress on Medical Librarianship, c/o The London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1.

INTERNATIONAL DIABETES CONGRESS

The First International Congress of the International Diabetes Federation will be held in Leyden, Holland, from 7-12 July 1952.

The Secretary-Treasurer is Dr. F. Gerritzen, and the Congress office is at 33 Prinsegracht, The Hague, Netherlands.

EASTER STAMPS—A USEFUL TIP

For 5 years a South African medical practitioner has used Easter Stamps on all his correspondence with his patients, including his month-end statements, and this year he intends to do so for 2 months—both March and April.

He has found that in return of cash alone, he benefits to the extent of a 15% better response than in any other month in the year.

It seems the 'little penny squares of goodwill' can more than pay their way. They not only signify support of a worthy cause, in that they help the nation's cripples to recovery, but they engender such goodwill that they actually increase contributions.

TUBERCULOSIS CONFERENCE

The Third Commonwealth and Empire Health and Tuberculosis Conference will be held in London from 8-13 July 1952. It is open to all interested in preventive medicine. Interesting subjects for discussion include *Protective Vaccination, Con-*

temporary Ideas in the Management of the Tuberculous Patient, The Social Worker and the Tuberculous Family, The Patient in Industry and Tuberculosis in British Colonial Territories.

Amongst those who have already promised to speak are Dr. G. C. Brink, Department of Health, Ontario, Canada; Dr. B. A. Dormer, Chief Tuberculosis Officer, Union of South Africa; Dr. J. B. McDougall, World Health Organization, and Mr. T. Holmes Sellors, Thoracic Surgeon, London.

A new feature of the Conference will be special smaller gatherings for those with particular interest, whether doctors, nurses, public health officials or social workers, at which appropriate subjects will be discussed. Receptions for delegates are being held at many well-known institutions, and a large number of visits to hospitals and sanatoria have been arranged in addition to tours of general interest.

All information can be obtained from the NAPT, Tavistock House North, Tavistock Square, London, W.C.1.

INTERNATIONAL CONGRESS ON DISEASES OF THE CHEST AND TUBERCULOSIS

The 12th International Union Against Tuberculosis and the 2nd International Congress on Diseases of the Chest, sponsored by the American College of Chest Physicians, will be held in Rio de Janeiro, Brazil, from 24-30 August 1952, under the Presidency of Professor Manoel de Abreu. Dr. Reginaldo

Fernandes, Rio de Janeiro, is the Secretary-General for both Congresses.

Those interested in attending and who may wish to present papers on tuberculosis should communicate with Professor Etienne Bernard, Secretary-General of the International Union Against Tuberculosis, 47 Rue de Courcelles, Paris, France.

Those wishing to present papers dealing with non-tuberculous diseases should communicate with Dr. Andrew L. Banyai, Chairman, Council on International Affairs, 112 East Chestnut Street, Chicago 11, Illinois.

All requests should be forwarded immediately by airmail and the title of the paper, together with an abstract not exceeding 100 words, should be submitted to the appropriate officers.

INTERNATIONAL AERO MEDICAL ASSOCIATION

The 23rd Annual Meeting of this Association will be held at the Statler Hotel, Washington, D.C., from 17-19 March 1952. All South African medical practitioners interested in attending are invited to be present.

Authorities in all fields of aviation medicine will contribute to the scientific meeting, and in addition an interesting social programme has been arranged for visitors.

Practitioners wishing to participate by presenting a paper or by having it read by title should communicate immediately with Dr. Harry G. Armstrong, Aero Medical Association, 214 South State Street, Marion, Ohio, U.S.A.

REVIEWS OF BOOKS

THE BRITISH ENCYCLOPAEDIA OF MEDICAL PRACTICE

The British Encyclopaedia of Medical Practice. Vol. 7. Under the General Editorship of The Rt. Hon. Lord Horder, G.C.V.O., M.D., F.R.C.P. (Pp. 672 + xv + Index, with 188 figures. 66s. per volume. 2nd edition.) Butterworth and Company (Africa) Limited, 1 Lincoln's Court, Masonic Grove, Durban. 1951.

Contents: 1. Hypnotism. 2. Hypoglycaemia. 3. Ichthyosis. 4. Immunity and Immunization. 5. Impetigo. 6. Impotence. 7. Inducement and Inducement. 8. Industrial Injuries. 9. Infant Feeding—The Feeding of Normal Infants and Children. 10. Influenza. 11. Insomnia. 12. Intelligence Tests. 13. Intestinal Obstruction. 14. Intestines, Tuberculosis. 15. Jaundice. 16. Joints—Diseases and Disorders. 17. Joints—Injuries and Internal Derangements. 18. Kala-Azar. 19. Keloid. 20. Ketosis. 21. Kidney, Surgical Diseases. 22. Labour—Normal Labour. 23. Labour—Anaesthesia and Analgesia. 24. Labour—Faults in the Forces. 25. Labour—Malposition and Malpresentation of the Head. 26. Labour—Breech Presentations. 27. Labour—Transverse Lie, Shoulder and Compound. 28. Labour—Disproportion due to Enlargement of the Foetus; Hydrocephalus; Monsters. 29. Labour—Plural Pregnancy. 30. Labour—Contraction and Deformity of the Bony Pelvis. 31. Labour—Obstructions in the Soft Passages. 32. Labour—Rupture of the Uterus. 33. Labour—Complications of the Third Stage. 34. Labour—Operative and Manipulative Procedures. 35. Labour—In the Tropics. 36. Labour—Radiology. 37. Laryngeal Apparatus Disorders. 38. Landry's Paralysis. 39. Larynx Diseases.

The seventh volume of the *British Encyclopaedia of Medical Practice* comes up to expectations. A considerable part of this section of the encyclopaedia is devoted to normal and abnormal labour, including an extremely useful chapter on the radiology of labour, as well as a practical section on anaesthesia and analgesia during the process of parturition. Marston concedes that psychological preparation and ante-natal instruction may be adequate by themselves to produce a painless labour, but he considers that it is safer and more successful to use drugs as well.

The rest of the volume contains a great variety of topics of perennial interest to the practising physician, e.g. the production of immunity against specific diseases. Prevention against whooping-cough still seems an undecided issue, particularly as the prophylactic potency of the vaccines available may vary very widely. Dealing with protection against tuberculosis, Hugh Paul points out that reliance on 'naturally acquired immunity is unsafe, unsatisfactory and dangerous'. He says, however, that 'so far no vaccine has been discovered with the safety, efficiency and ease of control of say, vaccination against smallpox or injections against typhoid fever'. This view is certainly in keeping with the attitude of American investigators such as Myers and also with the

views expressed in the recently published *Report of the Medical Research Council for the Years 1948-1950*.

The chapter on hypoglycaemia draws attention to the fact that chronic spontaneous hypoglycaemia is not a rare condition. It is, however, important for the general practitioner to be aware of its existence, as it may have medico-legal importance in cases of alleged alcoholic intoxication. The differential diagnosis from orthostatic hypotension is also important and, in treatment, it is wise to remember that high protein and fat diets can cope with the situation without stimulating the pancreas to produce more insulin.

The chapter on hypnotism includes the important statement that treatment by hypnotic suggestion can be used satisfactorily by any medical practitioner who has the time and the inclination to learn this technique, and that hypnotism is not to be regarded as a particular task for the specialist. There are also interesting reviews of intelligence tests by a psychologist. This is, indeed, a field with which the practising physician should become more conversant, so that he may be aware of the great value to which these tests may be put by those skilled in their use. Normal infant feeding is also reviewed very thoroughly and the table of contents reveals many other topics of importance to the general practitioner as well as the surgeon.

The volume is handsomely produced and is a most attractive instalment of the encyclopaedia.

PATHOLOGY OF THE HUMAN FOETUS

Pathology of the Fetus and the Newborn. By Edith L. Potter, M.D., Ph.D. (Pp. 574 + xvii, with 601 illustrations. \$19.00.) Chicago: Year Book Publishers, Inc. 1952.

Contents: 1. Early Development of Fetus and Placenta. 2. Rate of Antenatal Growth. 3. Chorionic Vesicle and Placenta. 4. Abortion. 5. Causes of Fetal and Infant Death. 6. Postmortem Examination. 7. Prematurity. 8. Anoxia. 9. Birth Trauma. 10. Infection. 11. Malformations. 12. Tumors. 13. Multiple Pregnancies and Conjoined Twins. 14. Heart and Blood Vessels. 15. Lungs and Trachea. 16. Thymus and Glands of Internal Secretion. 17. Mouth, Esophagus, Stomach and Intestine. 18. Diaphragmatic and Abdominal Hernia. 19. Liver and Gall-Bladder. 20. Pancreas. 21. Spleen. 22. Kidneys, Ureters, Urinary Bladder and Urethra. 23. Sex Organs, Gonads and Mammary Glands. 24. Central Nervous System. 25. Skeleton. 26. Skeletal Muscles and Joints. 27. Skin. 28. Blood. Index.

This is in very many ways a very remarkable book. Its orientation is in the direction of pathology but, following the trend of modern pathologists, the study is based on physiology and anatomy.

The book is important because of the great neglect which the study of the foetus and the newly born has suffered. The volume, therefore, becomes an invaluable reference work for the academic physiologist as well as the clinician.

The investigation, however, has been so comprehensive that the book will find an important place on the shelf also of the medico-legal pathologist who, in South Africa, functions quite separately from the clinical pathologist or the morbid anatomist.

The value of the book for the medico-legal pathologist is particularly great in respect of the chapters dealing with antenatal growth, birth trauma (especially head injuries) and the respiratory system. Interesting also is the very useful chapter on the technique of performing an autopsy on infants. This has been illustrated very admirably.

There is an important account of the appearance of ossification centres which are of primary importance in determining legal viability in this country. Professor Potter draws attention to the work of Cruikshank and Miller who found the best correlation to be between length and ossification centre. Even this was only 78% and demonstrates the great variability which the pathologist must be aware of and bear in mind.

The volume has been produced magnificently and the illustrations are impeccable. This is a book which should be in the hands of every obstetrician, pathologist and physiologist, and the principles underlying the writing of the book are well exemplified in the following quotation from the preface: 'The description of the body of a dead infant is of no value as an isolated piece of information, but if it is integrated with the various aspects of heredity, conception, development, intrauterine and extrauterine environment and behavior it becomes part of an important chronicle. Only by correlating all the facts of one case with all those of many cases can we hope to elicit the etiologic factors responsible for clinical and pathologic observations. Needless to say, studies in the associated disciplines of embryology, anatomy, physiology and chemistry are necessitated in the attempt to answer the questions constantly being posed by the abnormalities under observation.'

In addition to the ultimate aim of the pathologist, of immediate practical importance is the demonstration to the attending physician of the pathologic changes found in any fetus or infant who fails to survive and the correlation of these findings with the symptoms observed during life. When symptoms can be recognized as associated with specific pathologic processes a great stride has been made toward their prevention and cure.'

COELIAC DISEASE

Management of Celiac Disease. By S. V. Haas, M.D. and M. P. Haas, M.D. (Pp. 188 + x, with 12 illustrations. 40s.) London: Philadelphia; Montreal: J. B. Lippincott Company, 1951.

Contents: 1. Scope and Purpose of the Work. 2. History. 3. Definition. 4. Incidence. 5. Etiology. 6. Clinical Symptoms. 7. Pathology. 8. Roentgenographic Evidence. 9. Digestion and Absorption. 10. Digestive Juices, Enzymes, Etc. 11. Endocrine System. 12. Nervous System and Psychological Considerations. 13. Allergy. 14. Diagnosis. 15. Treatment. 16. Prognosis. 17. Celiac Disease Today. 18. Course. 19. An Etiologic Hypothesis. Summary. Bibliography. Index.

This valuable monograph contains the most complete and up-to-date account of coeliac disease available to-day. The work is based on a personal experience of over 600 cases of this condition, as well as a comprehensive discussion of the ideas of other investigators and an exhaustive review of the literature. The bibliography with 668 references, is in itself a monumental piece of research and should be of great value to all those who desire to pursue further studies.

The authors advocate strict diet for at least 12 months and stress the necessity for limiting carbohydrates to monosaccharides, as found in fruits and certain vegetables. The value of banana in this respect is indicated. Honey and dates containing glucose and laevulose are well tolerated. Any cereal grain, potato and cane sugar are absolutely forbidden. Fats are allowed in moderation and protein foods freely administered.

Although the exact etiology of coeliac disease still remains obscure, this work, however, is a distinct contribution towards our understanding of the disorder and towards its most effective treatment.

MOSQUITOES AND MALARIA

Mosquito Behaviour in Relation to Malaria Transmission and Control in the Tropics. By R. C. Muirhead-Thomson, D.Sc. (Pp. 219 + viii, with 16 illustrations. 30s.) London: Edward Arnold & Co. 1951.

Contents: Introduction.

Part I. 1. General Activities in Relation to Mating, Feeding and Longevity. 2. Nocturnal Activity and Biting Cycles. 3. Outdoor Resting Places and the Exodous from Houses. 4. Host Selection. 5. Behaviour in Relation to Temperature, Humidity and Light. 6. Behaviour in Houses in Relation to Control by Insecticides.

Part II. 7. Selection of the Breeding Place. 8. Light, Shade and Mechanical Obstruction. 9. Water Movement and Silt. 10. Water Temperature. 11. Dissolved Oxygen, Organic Matter and Pollution. 12. Salt Water and Tidal Influence. Index.

This book is a review of work done during the past 15 years on the general behaviour of anopheline mosquitoes in the tropics. At the end of each chapter a list of references is given of the work reviewed.

The mating, feeding, egg-laying and other habits of anopheline mosquitoes are discussed, together with such other points of interest as their outdoor and indoor habits, resting places, host selection; the effect of temperature, humidity, light and shade; water movement, its degree of purity and its suitability or otherwise for the survival of larvae and for egg-laying by the adult insects.

The selection of breeding places is possibly only a matter of choice on the part of the female mosquitoes, as they lay their eggs chiefly at night time, when light and other conditions seem to have little effect anyway. Larvae seem able to live in almost any reasonably sheltered and shady locality and their distribution in likely localities possibly depends on the number of eggs which happen to be deposited at a certain time by the female. But it seems as if much work still needs to be done in this connexion, under natural conditions, because anopheline mosquitoes apparently do not easily lend themselves for study under controlled laboratory conditions.

In a special chapter the drugs Pyrethrum, DDT, BHC and Gammexane are discussed. Of these the last seems to be the ideal and most effective insecticide judging by the fact that after its use dead insects could be found indoors lying about in all sorts of places. In the hands of certain authors, however, this was not found to be the case with DDT. They consider the action of Pyrethrum and DDT to be repellent rather than insecticidal, thus explaining the paucity of dead insects actually seen, coupled with low live-catches in dwellings during daytime. More and better controlled work is therefore needed with DDT, especially with respect to its action on *A. gambiae* which is a highly domesticated anopheline.

This book will be of great help to those interested in the ecological studies on anopheline mosquitoes and their relation to malaria prevention and its eradication.

THE NATURE OF DISEASE?

The Nature of Disease Institute Third Annual Report. By J. E. R. McDonagh, F.R.C.S. (Pp. 451 + lviii, with figures. 21s.) London: William Heinemann Medical Books Limited, 1951.

Contents: Introduction. 1. The Most Important Region in Protein. 2. The Manifestations of Disease in Animals. 3. The Physico-Chemical Section. 4. The Micro-Biological Section. 5. The Clinical Section. Appendix I. Appendix II. Appendix III. Appendix IV. Summary. Epilogue. Bibliography. Index.

The publishers claim that this Third Annual Report is a 'remarkable contribution not only to veterinary medicine but also to ecological science'.

The author's unique pathology is also illustrated in his views on the common cold which 'is a seasonal manifestation and one that is caused, as they all are, by an intestinal toxæmia. Practically all that I have said in regard to the common cold applies with equal force to influenza, which may be viewed as being a more acute and severe form of the same manifestation of disease. The only real difference between the common cold and influenza, is that the storer-functioning portion of the protein needs to be more over-expanded, and one of the regions of either the radiator- or attractor-functioning portions to be more over-contracted to produce the latter than the former (p. 186).

On the nature of cancer, the author states: 'In order to convert a potential victim into an actual victim of a sub-acute or chronic manifestation, and to convert the morbid condition of inflammation into the one of cancer, the sole requisite is that the food ingested be of an inferior quality over a longer period of time' (p. 414).

CHANCE AND DESIGN

Chance and Design in Physiological Research. By G. L. Brown. An Inaugural Lecture Delivered at University College London 5 December 1949. (Pp. 14. 3s.) London: H. K. Lewis & Company Limited. 1951.

This entertaining and interesting address was delivered by Professor Brown as his inaugural lecture at University College, London, when appointed Jodrell Professor at the University of London. Professor Brown has covered a wide field including the changes with which we have been faced in recent years in the understanding of bio-electrical phenomena. The address makes clear that increasingly complex laboratory apparatus must be used by physiologists in their attempts to extend the horizons of our planned knowledge of the organism, and provokes interesting speculation about the role of chance in determining the direction which research may take; Prof. Brown cited the extremely pertinent example of the work of Sir Henry Dale who discovered histamine in ergot extracts and found an ester of acetylcholine as a contaminant in a sample of liquid extract of ergot sent to him. The position is put very well by Professor Brown when he states 'chance there may be, of course, but the real sign of greatness is the seizing and exploitation of fortune and the instant preparation of the gift which the future offers'.

Professor Brown's inaugural address should be read carefully by students as well as the teachers of the fascinating study of physiology.

MEDICINE AND THE PLUTONIUM PROJECT

Industrial Medicine on the Plutonium Project: Survey and Collected Papers. Edited by Robert S. Stone, M.D. First Edition. (Pp. 511 + xxiv, with illustrations.) New York; Toronto; London: McGraw-Hill Book Company, Inc. 1951.

Contents: 1. Foreword. 2. Preface. 3. Plutonium Project Record Foreword. 4. Introductory Note on the Plutonium Project Record. 5. Preface to the Health Volume in Division IV. 6. Introduction. **PART A. Survey.** 1. Medical Services of the Plutonium Project. 2. Biological Bases for Maximum Permissible Exposures. 3. Protective Measures for Personnel. 4. Clinical Laboratory Examination of Plutonium Project Personnel. 5. Hematological Effects of Ionizing Radiations. 6. Biochemical Studies Relating to the Effects of Radiation and Metals. 7. Uranium Excretion Studies. 8. Distribution and Excretion of Plutonium. 9. Management and Treatment of Exposed Personnel. 10. Requirements of an Adequate Health Service in Relation to Atomic Research and Industrial Development.

PART B. Collected Papers. 1. Industrial Medical Program—Hanford Engineer Works. 2. Blood Changes in Human Beings Following Total-body Irradiation. 3. Hematological Studies on Patients Treated by Total-body Exposure to X-rays. 4. Changes in Mean Blood Levels of Metallurgical Laboratory Employees during the First Year of Employment as Related to Working Conditions. 5. Biometric Investigations of Blood Constituents and Characteristics in a Population of Project Workers. 6. Effect of Exercise on Leucopenia: A Statistical Analysis. 7. Determination of Radium in Excreta. 8. Treatment of Plutonium Poisoning by Metal Displacement. 9. Status of Health and Protection at the Hanford Engineer Works. 10. Tolerance to Whole-body Irradiation of Patients with Advanced Cancer. Index.

The Medical Section of the project was concerned largely with personnel. There was, besides the usual medical service, the responsibility of detecting the slightest indications of injury due to radiations or chemically toxic materials. Since there were no well-established clinical tests for any of the possible early changes resulting from these hazards, this was new ground to be covered.

One senses the hazards and the urgency with which this work was undertaken, and one is reminded of the yellow fever project in the Panama zone.

Once plutonium gains entrance into the body it is localized largely in bone and is excreted very slowly. It produces bone tumours. Those radioactive isotopes liberated in the fission reaction which localize primarily in bone produce significant adverse effects in the haematopoietic system: lymphoma and leukaemia are common effects.

Plutonium which has a half-life of 2.4×10^4 years is an alpha-emitter. Since alpha rays have shallow penetrability (e.g. those emitted by plutonium will penetrate only approximately 40μ into the skin) no direct effects and minimal indirect effects on haematopoietic tissue appear likely if it does not gain entrance to the body. But plutonium is the most serious of all contaminants because it is known to diffuse rapidly from wound areas and only a very small amount is necessary to exceed tolerance. Once plutonium has been fixed in the body it is extremely difficult to remove. Procedures similar to those used to remove radium fixed in the body have been found experimentally to be of no value. To-date, nothing so far tried experimentally, including B.A.L., has proved very promising.

Uranium is considered to be relatively non-toxic from the standpoint of radio-activity, but it is chemically toxic in small amounts if it actually gets into the blood stream. Therefore uranium is relatively safe to handle in most of its compounds.

The workers investigated the effects of X-rays, given in daily doses for 20-30 days to eight patients suffering from carcinomatous metastases, on the haematopoietic system. They likewise studied closely the effects of P^{32} on five patients with polycythaemia vera. Complete protocols are given.

The following quotation will give an inkling of the delicacy of the work:

'Equal in importance to an adequate analytical method is the necessity for scrupulous avoidance of contamination at all stages of the analysis. Thus one investigator has pointed out that his early studies agreed much better with atmospheric conditions than with known levels of personnel exposure. In rainy weather, for example, all values were low, whereas in dry weather all values were high because of atmospheric contamination from a nearby plant.'

PATTERNS OF DISEASE

Patterns of Disease on a Basis of Physiologic Pathology. By Frank L. Apperly, M.A., M.D. (Oxford), D.Sc. (Melbourne), F.R.C.P. (London). (Pp. 456 + xiii, with 50 figures and 37 charts. 63s.) London, Philadelphia, Montreal: J. B. Lippincott Company. 1951.

Contents: 1. Life and Disease. 2. Pathology, the Science of Disease. 3. The Passive Changes in Disease: Nutrition and its Disturbances. 4. The Passive Changes in Disease: Disturbances of the Peripheral Circulation. 5. The Reactive Changes to Injury: The Local Reaction—Inflammation. 6. The Reactive Changes to Injury: The General Reaction—Leukocytosis, Fever and Antibodies. 7. The Reactive Changes to Injury: The Local Reaction—Repair. 8. Infection and Resistance. 9. Some Special Types of Inflammation: The Reaction to Certain Other Living Forms. 10. Pigmentation and Certain Degenerations. 11. Hypertrophy and Hyperplasia. 12. Tumours. 13. Cysts. 14. Diseases of the Cardiovascular System. 15. Diseases of Blood and the Organs of Blood Formation. 16. Diseases of the Urinary System. 17. Diseases of the Respiratory System. 18. Diseases of the Gastro-intestinal Tract and the Peritoneum. 19. Diseases of the Liver and the Gallbladder. 20. Diseases of the Pancreas. 21. Diseases of the Female Reproductive Organs. 22. Diseases of the Breast. 23. Diseases of the Male Reproductive Organs. 24. Diseases of the Cerebrospinal System. 25. Diseases of the Ductless Glands. 26. Diseases of the Locomotor System. 27. Disease and the Man. Index.

This book is a product of modern thought in pathology. It sets out to present disease processes from the beginning, tracing their progression through the biochemical changes, the altered function, the altered anatomy, the final cure or death and emphasizing the compensatory mechanisms adopted by the body.

As far as possible, morbid anatomy has been eliminated. The aim has been to integrate the basic sciences with the practice of medicine. The author apologises in advance for the 'shocking dogmatism' he has shown and claims that this has been to avoid lengthy and tortuous argument. He makes no attempt to present different viewpoints and there is no reference to the literature. But herein lies the chief weakness of the book, for in so doing he has presented the workings of the body in too mechanistic a fashion. Surely it is better to admit our ignorance than to present a 'logical' story which is incorrect? To give only 2 examples: What is gained by saying that polycythaemia vera is due to an over-secretion of Castle's factor or that haemophilia is the reverse of purpura haemorrhagica and depends on an excessive resistance of the blood platelets?

There is much that is good and novel in this book, but a little less dogmatism and more accuracy would greatly improve it.

MEDICAL CINÉ FILMS

Catalogue of 16 mm. Medical Films Available in South Africa. Compiled by S. M. Lewis, B.Sc., M.B., Ch.B. (Cape Town). (Pp. 101 + v. 3s. 3d. post free.) Obtainable from the Medical School of the University of Cape Town and the Medical Libraries of the University of the Witwatersrand.

Contents: 1. Arrangement. 2. Names and addresses of film sources. 3. Abbreviations. 4. The Catalogue: Anatomy; Anaesthetics; Dentistry; Dermatology; Ear, Nose and Throat; Embryology and Reproduction; Evolution and Heredity; First Aid; Health Education; Medicine; Medical History; Medical Organization; Neurology and Psychiatry; Nursing; Nutrition; Obstetrics and Gynaecology; Ophthalmology; Pediatrics; Pathology and Bacteriology; Pharmacology; Physiology; Physiotherapy; Public Health; Radiology; Rehabilitation; Surgery; General, Operative, Orthopaedic, Plastic; Urology; Venereal Diseases; Miscellaneous.

A useful work indeed has been compiled by Dr. S. M. Lewis who has prepared a very comprehensive list of medical films available in South Africa.

Readers who know of films not mentioned in this catalogue would perform a valuable public service by communicating with Dr. Lewis who can be reached c/o Photographic Department of the Library of the University of Cape Town.

THE LIVER

Liver Disease: An Edited and Illustrated Record of an Informal, International Meeting held at the Ciba Foundation, London. Consulting Editor: Sheila Sherlock, M.D., F.R.C.P. Editor for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch. (Pp. 249 + xiii, with 112 illustrations. 25s.) London: J. & A. Churchill Limited, 1951.

Contents: 1. Protein Metabolism in Liver Disease. 2. The Aetiology of Hepatic Cirrhosis. 3. Aetiology of Portal Hypertension and Ascites, and its Treatment. 4. Pigment Metabolism. 5. Splanchnic Blood Flow. 6. Infectious Aspects of Liver Disease.

Liver disease is commonly encountered in clinical practice. Knowledge of the functions of this organ has been very limited and the approach has of necessity been chiefly morphological. It is being realized increasingly that morphology alone can not supply all the answers.

This volume is very timely and presents a collection of papers read at an international conference on liver disease. The

subject matter includes both experimental and clinical observations by workers in this field. The discussions at the end of each section tend to throw a critical light on some of the work and make towards a more balanced assessment of some of the results.

The enthusiasts will be interested to find that it is only the fatty liver associated with alcoholism and nutritional disturbances that may benefit from therapy with lipotropes. Views on the relatively recent surgical procedures aimed at relieving portal hypertension varied from cautious enthusiasm to complete disappointment with the results. The papers and discussions on ascites show how complicated this remains and the multiplicity of factors involved. Cirrhosis remains a problem, the experimental worker differing somewhat from the clinician about the role of alcohol. It is of interest to note that cirrhosis as a sequel to infectious hepatitis is considered by some authorities to be a relatively rare complication. It is wise to take stock of our knowledge. Dr. Sheila Sherlock is to be congratulated for setting the ball rolling and the Ciba Foundation for sponsoring this liver symposium.

AIDS TO PHYSIOLOGY

Aids to Physiology. By Henry Dryerre, Ph.D., M.R.C.S., L.R.C.P. (Lond.), F.R.S.E. Fourth Edition. (Pp. 327 + vii, with 66 figures. 7s. 6d.) London: Baillière, Tindall & Cox, 1951.

Contents: 1. Introductory—The Cell and Cell Division. 2. The Chemistry of the Body. 3. Connective Tissues and Epithelia. 4. The Muscular and Nervous Tissues. 5. The Neuro-muscular Mechanism. 6. The Blood. 7. The Heart—Circulatory System; Lymphatic System. 8. Respiration. 9. The Digestive Tract—and its Glands; General Mechanism. 10. Digestion and Absorption. 11. Metabolism and Animal Heat. 12. The Kidneys and the Urine. 13. The Skin and its Functions. 14. The Nervous System. 15. The Senses and the Sense Organs—Touch, Common Sensations, Special Senses—Smell—Taste. 16. The Ear and the Sense of Hearing. 17. The Eye and the Sense of Sight. 18. The Endocrine Organs. 19. Reproduction. Appendix—Physiological Data. Index.

The fact that this particular *Aid* has reached a fourth edition is objective evidence that it serves some practical (but unexpected) purpose.

Although this reviewer is distinctly antipathetic to this mode of acquiring information, he must admit that, within its limitations, this little volume is very well prepared. It is difficult to see, however, what use it can have for the really intelligent student.

CORRESPONDENCE

ALCOHOLISM

To the Editor: Mrs. Marty Mann, Chairman of the National Committee on Alcoholism in the United States, stated during her recent visit to this country that 'alcoholism was a disease' (vide *Rand Daily Mail*, 21 November 1951). I feel, however, that the view may be reasonably propounded that alcoholism is a symptom of social disease rather than a disease in itself, and that in so far as this is so, the extent of its incidence in a community will be determined not so much by factors which emerge from the individual psycho-somatic personality (as Mrs. Mann believes) but rather from the multifactor environment in which the individual personality is projected. The factors in the external environment which so operate embrace the entire gamut which induces in the human consciousness a sense of fear, anxiety or general insecurity of tenure. If we regard alcoholism as a symptom of escape from harrowing stresses, as indeed we must do, then it follows that any variation in its incidence in a community must reflect some change in the psycho-social security formerly enjoyed by that community. I shall endeavour to prove my thesis from an analysis of some Australian statistical data (Table 1).

Reference to the above figures reveals that in all Australian States, during the War, and particularly in the most densely populated States, the incidence of drunkenness was high, and that in all States in the post-war years there was a sharp progressive rise in the incidence thereof. The inference emerges that the Australian people in the years of peace have experienced a sharp decline in their sense of security—a decline which even now shows no sign of abating. The growing insecurity of Australia is due to two politico-social factors—(a) the continued economic inflation and (b) the fear of a pan-

TABLE 1: CONVICTIONS FOR DRUNKENNESS PER 10,000 OF THE MEAN POPULATION (AUSTRALIA)

Convictions for Drunkenness per 10,000 of the Mean Population

	1939	1944	1945	1946	1947	1948
New South Wales	117.8	119.8	149.3	210.9	255.5	272.7
Victoria	60.8	62.3	52.0	57.3	72.3	78.5
Queensland (a) ..	108.9	69.3	107.2	146.2	155.1	186.2
		(a)	(a)	(a)	(a)	(a)
South Australia ..	43.5	63.9	55.6	67.1	75.2	82.1
Western Australia	56.6	85.6	82.9	82.2	84.5	84.8
Tasmania	17.0	11.9	9.0	17.8	16.9	18.9
Aust. Cap. Territory ..	91.2	43.7	24.7	85.6	165.1	227.8
Total	88.0	85.9	99.4	132.1	144.4	170.4

Asiatic encirclement. It may be postulated that while these two factors exert their depressing effects upon the corporate consciousness, the rise in the incidence of alcoholism in

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P. 17

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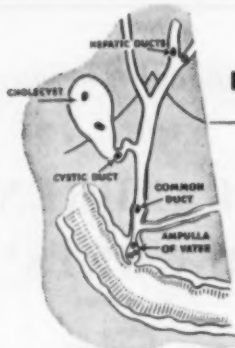
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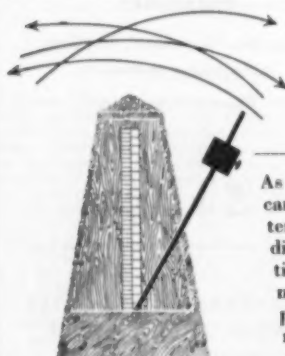
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Australia will be sociologically inevitable. To put it in general sociologic terms, the incidence of alcoholism in Australia is, as elsewhere, a direct function of the socio-economic condition of the population. Again, in Australia, the greater the sense of insecurity, the greater becomes the demand for an opiate to dull the bitter moods of discontent. This fact is reflected in Table 2.

TABLE 2: CONSUMPTION OF INTOXICANTS PER HEAD OF THE MEAN POPULATION IN AUSTRALIA (IMPERIAL GALLONS)

Year	Consumption per Head of Mean Population		
	Spirits	Wine	Beer
1938-39	0.22	0.65	12.13
1943-44	0.23	1.17	13.00
1944-45	0.23	1.18	12.90
1945-46	0.32	0.96	13.45
1946-47	0.29	1.09	15.94
1947-48	0.31	1.37	15.33
1948-49	0.33	1.41	17.96

The figures show that the rise in the incidence of drunkenness in Australia has been associated with a rise in the *per capita* consumption of alcohol. The inference, however, does not emerge herefrom that the drastic curtailment of liquor sales would necessarily reduce the incidence of drunkenness.

Some South African statistics recently presented by the Hon. Dr. Karl Bremer, Minister of Health in the Union Government, demonstrate the fact that the liability of an individual to alcoholism may depend upon his or her sexual and racial status. This fact is reflected in the figures in Table 3 indicating the percentage increase in convictions for drunkenness, by race and sex, in Johannesburg during the period 1939-47.

TABLE 3

	Euro-peans	Coloureds	Asians	Natives	All Races
Men	58	130	467	39	49
Women	134	165	133	231	200
Both sexes	63	139	350	50	59

These figures show (a) that in South Africa the incidence of drunkenness has increased among all races; (b) that the increase has been greatest in the Asian races; and (c) that for all races, except the Asian, the increase has been far greater in the female than in the male sex.

The general inference may accordingly be drawn that in South Africa all races and sexes have been exquisitely sensitive—albeit in varying degree—to the impact of environmental stresses, and further that, if the objective environmental situation remains constant, the rise in the incidence of drunkenness will be sociologically inevitable, and will continue to express itself as a direct function of (a) the sex composition of the population; and (b) the racial composition of our population, etc. This finding, logically speaking, must determine the method of control of alcoholism in South Africa. In effect, it calls for the direction of our therapeutic efforts to the dominant segment, i.e. the environmental segment, of the body-mind-surround continuum. This form of control is medico-sociologic in character, and involves of necessity (a) amelioration of the socio-economic condition of the population; (b) the normalization of the sex composition of the population; and (c) the stabilization of the racial components of the population, etc. But the form of control advocated by Mrs. Mann, which is only medical in character in so far as

it is directed exclusively to the recessive segment, i.e. the body-mind segment, of the cosmic continuum, is foredoomed of necessity to failure; and finally, to the extent that Mrs. Mann persists in committing the methodologic error of mistaking a function for a variable, she will—where the control of alcoholism is concerned—be fighting the devil with fire.

2 Barbican Buildings,
President Street,
Johannesburg.
31 December 1951.

Louis F. Freed.

ETIOLOGY OF CANCER

To the Editor: The analogy drawn by Mrs. Annabelle Cohen (this *Journal*, 5 January 1952) between my views on the psychosomatics of cancer and those of Galen is tendentious, and the reminder she proffers that cancer occurs not only in man, but also in rats, mice, dogs, etc., is superfluous. Mrs. Cohen is, however, interested to know how I would attribute the 'disharmonic emotions' of hatred, arrogance, cruelty, etc., to 'these creatures of Nature'. My reply is that these emotions, as well as their antagonists, are universally present in living organisms, and in this connexion I would refer her to the investigations of Pavlov (1927), Kohler (1925), Masserman (1943), Maier (1949), etc., which demonstrated that, in certain circumstances, experimental animals developed behaviour patterns closely resembling neurotic behaviour in man.

The results of these classical investigations may be presented in the form of a generalization, viz. that all living organisms react sensitively to stimuli—be these stimuli integrative or non-integrative in character. The impulse in all living organisms, however, is to reach out instinctively, as it were, to the sources of integrative stimulation, and to withdraw or regress from the sources of non-integrative stimulation. This impulse in organisms, which I have called 'the drive for harmonic integration' within the noumenal and the phenomenal world, is in the main an unconscious process, only rarely erupting into consciousness as a purposive force. There can be nothing higher in the life-experience of any organism than 'harmonic integration', so that this is ever the master-end towards which the telic activities of the individual compulsively converge. But the state of harmonic integration is invariably fluid and dynamic for the reason that it is, of necessity, dependent upon the structuro-functional wholeness or integration of the organism—a state which in turn is dependent upon the morphogenetic and behavioural activity of cells or groups of cells. When this 'wholeness' is disturbed by physical or other environmental influences, the organism attempts forthwith to recover it by appropriate physiological or morphogenetic activities on the part of its cells. In the words of Russel (1945), the organism actively seeks out and selects the substances necessary for its metabolism, and also the appropriate environment wherein it can maintain itself at the highest level of adaptation. Now this drive-like, 'triebartig', character of all organic activity was referred to by Charles Darwin as 'the struggle for existence', but in using the term Darwin conceived of 'struggle' as something fatalistic, and 'existence' as the dismal end of man. I prefer to use the term *drive for harmonic integration* because of the sense of well-being which that state confers. The drive for harmonic integration does not involve, of necessity, a bloody and merciless struggle against contemporary members of the species. Man made in the spiritual image of the Ancient of Days does not prefer to be a wolf to man. Only insecurity of tenure makes him so. But the drive for integration or structuro-functional wholeness is evinced not only by the total multicellular organism, but also by all the individual cells comprising the organism, be that organism plant or animal. Thus in the case of cells, Holtfreter (1948) has shown that the process of regeneration, compensatory hypertrophy and functional adaptation, is a *conditio sine qua non* to adaptive response, and is universal in the organic realm, coming into play when the normal course of life activities is hindered or thwarted by unfavourable circumstances or by experimental interference of man.

This cellular drive for structuro-functional integration emerges in varying degree, but its power is never completely absent. Russel cites the example of what happens in *Amblystoma punctatum*. In an experiment several blastopore lips from early gastrulae of *A. punctatum* were cut out and

exposed for about 10 minutes to alkali, which caused them to disintegrate into a heap of single amoeboid cells. The disorganization was carried still further by stirring and intermingling the free cells by means of a glass needle. When the suspensive fluid was subsequently neutralized, the cells re-aggregated into one or several spherical bodies, the cellular arrangement of which was, of course, quite different from the original one in the gastrula. During the following days there occurred a certain amount of re-organization, for instead of retaining their random distribution, the cells performed directed movements which led to their sorting out and re-grouping into two germ layers; all mesodermal cells tended to disappear from surface positions and to slip into the interior of their bodies, while the endodermal cells, in competition with ectodermal cells, went to establish continuous, well-oriented surface epithelia. The internal mass of mesoderm became further segregated into the distinctly separated tissues of the notochord, somites and kidney. The latter formed long coils of nephric tubules provided with nephrostomes and surrounded by blood capillaries. The notochord cells, though not united into a single straight cord, were, on the other hand, not freely dispersed but appeared in the form of a continuous, slightly dendritic organ. Finally, the skeletal muscle cells were grouped into somites, the arrangement of which was, however, irregular. As Russel comments, in this remarkable case, through directive (or integrational) cell migrations, and through selective cellular adhesions and mutual inductive action, there was formed from quite abnormal beginnings an approximation to a normal organization. The complex activities concerned have all the appearance of co-operative striving to reach a normal end in conditions quite unprecedented in the history of the race.

Russel cites further the classical case of the regeneration (from the upper edge of the iris) of the lens extirpated from the eye of certain species of newt, a case which led G. Wolff, who discovered it, to postulate the existence in living things of a primary, not acquired, power of purposive or directive response. But as is the case with its individual cells so, too, the total multicellular organism reacts directly or purposively to the stimuli emerging both from its internal and external environment, and in doing so it engages in a form of behaviour known as *tropistic*, whereby it endeavours to adjust its body in such a way that both sides are equally, i.e. harmonically, stimulated. Such behaviour aims, then, at the maintenance of equilibrium or harmonic integration.

Tropistic behaviour varies in different organisms, and the form assumed will depend partly upon the type of stimulation to which the organism is subjected. The form of the tropistic reaction can be predicted and mathematically measured in a controlled experiment. The mathematical formulations evolved by Crozier and Hoogland (1934) are sufficient to indicate that, under certain conditions, it is possible to account quantitatively for the elementary forms of phototropic orientation; but this quantitative treatment—it should be noted—is concerned, not with the manipulation of dead numbers as an end in itself, but rather with the relationships of functional dependence evinced in the behaviour of the living organism. To put it concretely, the biological system, presented by any individual living organism, cannot be regarded as an isolated thing or event, but as a system of relations which lends itself to quantitative evaluation. To the extent that the living organism is a dependent variable, it behaves perforce as a dynamic open system, i.e. a system which exchanges energy with its surroundings. This exchange of energy, which is compulsive in character, may involve one or other of the following possibilities:

- i. It might lose energy until it attained dynamically stable equilibrium (or integration);
- ii. It might absorb energy until it lost equilibrium;
- iii. It might oscillate between equilibrium and disequilibrium; or
- iv. It might attain 'steady motion' or *Fließgleichgewicht*, as von Bertalanffy calls it, or *near harmonic integration*, as I prefer to say. The term 'near harmonic integration' is used here advisedly for the reason that absolute harmonic integration is ever a remote possibility and can only be asymptotically attained by an open organic system with increasing time. Thus an 'open system', though it does not necessarily do so, can, in suitable conditions, attain steady motion. We must defer to Burton (1939) that all organisms—plants, animals, and human beings—possess the same range

of possibilities in behaviour. Von Bertalanffy (1950) in his mathematical and hypothetico-deductive development of the theory of systems, deduces that the properties of steady motion characterize, in suitable conditions, open systems, and that they never characterize closed systems (systems which do not exchange energy with their environment). Then, on the hypothesis that an organism is an open system, it must be capable of assuming steady motion; but in so far as we have identified a state of adaptation (or near harmonic integration) with steady motion, we have, accordingly, confirmation that the organism is an open interacting system.

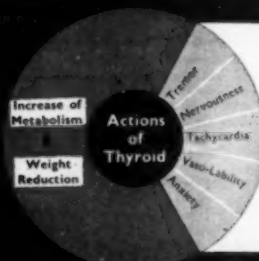
It is possible, by mathematical methods, to symbolize the nature of the interaction process as evinced by the elements comprising the total organism, and as evinced by the total organism itself. Thus Bertalanffy demonstrates mathematically that 'an open system', which every living organism is, behaves as a 'whole', and that the changes in every constituent element is interdependent with, or functionally related to, all the others.

This conception of causal processes, however, has application not only in the normal physiology, but also in the pathologic physiology, of all open systems. In effect, it has application as much in the ultra-microscopic virus itself as in the total multicellular organisms like the human being, in whom, in certain disease conditions like carcinoma, it is found. Bearing this conception of functional relationships in mind, we are in a stronger position to evaluate the true place of the virus in the causality of cancer. But first we must indicate the fundamental differences which characterize the approach of the virus theorists and the clinical methodologists to the problem. Virus theorists like Peyton, Rous and Gye have postulated that, because they have isolated a virus in cancer, the virus is *ipso facto* the cause of cancer. Thus Gye (1944) has stated categorically: 'Although not all the evidence of virus activities in cancer has been described, it is right to conclude with the statement that there is much evidence that viruses act as the continuing cause of cancer and that there is no factual basis for any other explanation.' Now, if we accept this virological explanation of cancer, it means, in effect, that we are arbitrarily converting an 'open system', which the virus factually is, into a 'closed system', and so investing it with the quality of autonomous activity, and therefore with the capacity for producing one-sided effects, like cancer; but in the light of contemporary methodology, this mediaeval principle of conservation causality (*Erhaltungskausalität*), according to which *causa aequat effectum*, is inadmissible in the analysis of Reality, and is, in fact, a naive attempt at oversimplification. Virologists will undoubtedly continue to succeed in isolating virus organisms in all cases of carcinoma, but I respectfully suggest that what they are discovering is not the cause, but only one factor—possibly the terminal factor—in the chain of causality. Virus organisms and organisms, like tubercle bacilli and pneumococci, are present in all human beings, but not all human beings acquire cancer, tuberculosis, or pneumonia, as the case may be. The reason is that bacteria, e.g. the viruses, are open systems, and accordingly their activity or virulence is intensified or modified by a concatenation of factors which operate partly in themselves but mainly in the host with which they interact. But the host, e.g. the human being, is also an open system; therefore the activity or virulence of the virus will be intensified or modified by the additional environmental factors to which the human being, as an open system, is of necessity subjected. To put the matter in methodologic terms: the virulence, i.e. the carcinogenic power of a virus, is a function of interacting factors operating in the soma, the psyche and in the environment of the human organism. In my paper *The Psycho-Sociology of Cancer*, which I read before the Cancer Conference convened in 1951 by the Students' Medical Council of the University of Witwatersrand, I adduced evidence to indicate that socio-psychological factors occupied a place of dominance in the incidence of cancer in a community. In so far as this is so, it means that in our present efforts to combat the cancer terror we are wielding the wrong end of the stick, that is to say, we are starting off at the virological end instead of at the sociological beginning of the chain of causal events.

The error perpetrated by investigators in the past has consisted in treating of the diverse factors in a causal continuum as closed and insulated systems whose composition remained fixed and immutable, with no materials ever entering and none ever leaving. This mechanistic approach, which has

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G. STOETTER, Med. Clin. 1936/30.

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led to the arbitrary break-up of natural unities in the phenomenal world, has had disastrous consequences for our civilization. It has led to the rigid compartmentalization of the somatic, the psychic and the social segments of the human personality; and, finally, to the degradation of man as the heir of the ages, and to the destruction of his hopes as a spiritual being.

Louis F. Freed.

2 Barbican Building,
President Street,
Johannesburg.
22 January 1952.

PSYCHOLOGICAL TREATMENT TECHNIQUE

To the Editor: The surgery of bacterial infections to-day still follows the sound principles taught since the role of bacteria in disease was established, and these as we know are: (a) where there is pus, let it out; and (b) eliminate the infecting organisms. With the advent of antibiotics the task of the surgeon is easier and the cure of many organismal infections more rapid.

Now a marked similarity can be noted between modern surgery for sepsis and really modern psychotherapy.

Wilhelm Stekel¹ stated: 'The consciousness of guilt is the chief cause of all neuroses and psychoses,' and added: 'Where there are no sins there are no neuroses.' The writer's independent investigations point to a rather similar conclusion.^{2,3,4}

However, in respect of psychological treatment, Stekel wrote: 'What we need is to be freed from the oppressive burden of religious, ethical and social inhibitions,' and further stated in justification of his views: 'When there is neurosis the repressions are caused by religious inhibitions'.⁵

Sound psychological treatment technique aims at the opening up and draining from the depths of the patient's mind of the abscess or abscesses with their content of 'pus'. However, the 'organisms' have still to be eliminated, and the patient stimulated to 'resistance' against further infection.

The 'organisms', as Stekel also has pointed out, are sins. These can be either real or imaginary sins, and the elimination of the latter 'delusory organisms' is undertaken by contrasting them with the 'real organisms' or real sins. However, to try to remove real sins, such as theft, adultery, murder, and blasphemy from the sufferers' minds by trying to persuade them that these have no reality, should very swiftly give the patients the impression that the psychotherapist is a dangerous criminal, lacking morals, lacking ethics and lacking a conscience.

The clue to the correct, ethical and moral line of approach is to be found in the teachings of a race that has given much to the world. Centuries ago the Jews taught remission of sins through vicarious sacrifice of an unblemished animal, and this method of expiation was also used by other nations, some of whom performed human sacrifice for the same purpose. The *lex talionis*, it would appear, must be satisfied, and a group of the Jews eventually gave to humanity the Christian doctrine, known to most of the present inhabitants of the world. Though this doctrine is considered an 'illusion' by many people to-day, as it was by Sigmund Freud⁶ and various other psychiatrists, the remarkable thing is that it really works. As a psychotherapeutic measure it is without peer both in eliminating the 'infecting organisms' and in stimulating the psyche or soul to 'resistance' against them, once the 'abscess' has been opened and drained by sound psychotherapy.

The techniques of prefrontal leucotomy, electro-convulsion therapy, and Metrazol or Insulin therapy, appear to operate by 'encapsulation' of the 'abscesses and organisms', which may at any time subsequent to such treatment recommence their 'burrowing' and 'spread of infection'.

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J. J. de Villiers, M.B., Ch.B. (Edin.).

224 Brook Street,
Brooklyn,
Pretoria.
27 January 1952.

SPECIAL DISSECTION OF THE NECK

To the Editor: Since my letter of 14 July 1951 in your *Journal* on the 'bloodless' dissection of the neck (as I stated it was recommended by Werkgarter many years ago), I have been requested to give my experience of its value over a period of 18 years. Such an undertaking would virtually mean writing a book—which I have no intention of doing. However, I shall endeavour briefly to give a few practical examples of its value.

I shall divide it into three categories: (1) Bodies taken from water alleged to have been drowned; (2) Falls from buildings; (3) Hanging.

(1) Wucherer in a dissertation in 1923 emphasizes that an autopsy should be undertaken in all bodies of women of the child-bearing age alleged to have been drowned, in order to establish if there was a pregnancy or not. Böhmer, on the other hand, stated that a detailed autopsy should be performed in all cases of alleged drowning in order to establish whether a person had been drowned or not. With the latter suggestion I fully agree but would add that in every case I employ the Werkgarter technique. It should be remembered that a bruise inflicted shortly before death which is not visible on the surface of the body may become apparent in a few hours or several days after death (Merkel and Walcher). Also abrasions and scratches on the neck which on the first examination of the body are light grey and easily overlooked may become strikingly apparent after some hours particularly when they dry (Reuter). But I think the supreme value of this 'bloodless' field technique obtains under the following conditions: 'If the violence is maintained until death, and for a short time afterwards, there may be no escape of blood from the torn blood vessels, the only effect of the crushing force being some pitting of the skin, and perhaps slight softening of the damaged area; usually, however, a little blood escapes at the margin of the crushed area and the haemorrhage becomes more evident if the compressing object alters its position. This explains the slight amount of bruising which may result from the pressure of the fingers of an assailant upon the neck of the victim in a fatal case of throttling, although the violence may have been so great as to have led to the production of haemorrhage in the loose cellular tissue between the larynx and the spine (Spilsbury and others). How could such a violent death be established by the usual *unaesthetic* and *crude* dissection of the neck?

(2) Is this a case of suicide, accident or homicide? I have always been impressed with the words of Reuter in such a case: 'Unter den Formen der vorsätzlichen Tötung nimmt die durch Fenstersturz sowohl kriminalistisch als auch forensisch-medizinisch eine besondere Stellung ein, da die Tat in der Regel mit grossen Raffinement von seiten des Täters ausgeführt wird und der Differenzierung gegenüber Verunglückung oder Selbstmord durch Sturz aus bedeutender Höhe Schwierigkeiten bereitet.' I have in mind a case where by careful general external and a particular internal examination of the neck it was possible to establish that the deceased, before being thrown out of the window of a 3-storey building, had been violently seized by the neck—position and shape of external marks and injuries to the subcutaneous and muscular tissues confirmed this. The cause of death was fractured skull and rupture of the thoracic aorta. The accused when confronted with the findings in the neck, admitted that he had an altercation with his wife and in a frenzy seized her by the throat but could not remember throwing her out of the window. It is these subsidiary findings at autopsy that strengthen the possibility of murder. The accused was found guilty of murder.

(3) In every case of hanging, whether typical or atypical, this technique must be used. A person may be strangled and subsequently suspended to simulate suicide by hanging. This should no longer be considered a rarity. Authentic cases have

been reported by Laves, Schrader, Weimann, Werkgartner (this author expresses very lucidly his views on the impossibility of producing post-mortem injuries to the subcutaneous tissues of the neck to simulate those of manual strangulation) and Mirto, Domenico e Nicoletti: 'Su di un caso di impiccamento simulante il suicidio e preceduto da morte per strangolamento.' This case was similar to one investigated by the writer.

I hope that these remarks will stimulate the interest of medical practitioners who have to perform medico-legal autopsies in this most valuable field of accurate scientific observation.

Finally, in these circumstances I think the words from *Modern Painters* most appropriate: 'The greatest thing a human soul ever does in this world is to see something, and tell what it saw in a plain way.'

R. H. Mackintosh,
Medico-Legal Pathologist.

Johannesburg.
31 January 1952.

ACUTE HYDRAMNIOS

To the Editor: I recently encountered the following case of acute hydramnios.

A European woman consulted me for a routine ante-natal examination and I estimated her to be about 6 weeks pregnant. She was 30 years of age and had one child aged 6. The previous confinement had been normal but she developed bilateral femoral thrombosis during the puerperium. At the time of my examination, however, there was nothing abnormal to be found. I saw her at 10 weeks and again at 14 weeks and found the uterus in complete conformity with the date she had given.

At 17½ weeks she consulted me again, complaining now of tiredness, backache and shortness of breath, and stating that she had noticed that she had got excessively large during the past fortnight. On examination I found the fundus midway between the umbilicus and the xiphisternum. She was absolutely certain that she had not felt life. There was no vaginal bleeding, no rise in blood pressure and no albuminuria. X-ray examination revealed no foetus. In spite of the fact that she had had all the signs and symptoms of pregnancy, I started to doubt at this stage whether she was, in fact, pregnant at all. Hydatidiform mole and a rapidly growing ovarian cyst were considered in consultation with a colleague, but on weighing up all the evidence had to be dismissed.

Three days later she was very much worse. The backache had got worse, and she became so distressed and dyspnoeic that she could hardly walk when admitted to hospital. The uterus had enlarged at a truly fantastic rate in the few days, reaching now to 2 fingers below the xiphisternum.

I examined her under general anaesthesia in the theatre and found the cervix very soft, admitting a finger easily. On internal ballotement a head was easily identified. I ruptured the membranes and labour started 37 hours later. Identical twin foetuses were born; one could just make out the sex as being male. They were perfectly normal. As had been expected, she had a severe post-partum haemorrhage which necessitated manual removal of the placenta.

Acute early hydramnios is an extremely rare condition and F. J. Browne (*Antenatal and Postnatal Care*, 1947) makes a plea for cases to be reported. His earliest case was at 18 weeks, approximately the same as this one, although this patient started being aware of excessive increase in size of the uterus at 16 weeks at least. This case was a very good illustration of how urgent and rapidly fatal these cases can be if pregnancy is not terminated at once. Early acute hydramnios appears to be pathognomonic of uni-ovular twin pregnancy.

B. M. Nel.

Urban's Buildings,
George, C.P.
1 February 1952.

TRAINING OF SOUTH AFRICAN DOCTORS

To the Editor: Without wishing to detract in any way from the value of the interesting and constructive article *Notes on the Training of South African Doctors* (this *Journal*, 26 January 1952), I feel that every general practitioner in the country should take urgent note of the sentence: 'We are in

danger of having too many officers and too few privates in our army.' Undoubtedly the author compares the specialists to the officers and the G.P.'s to the privates in the whole army of medical practitioners.

Now the private may be, and often is, a very fine fellow. He is the backbone of the army. He forms its first line of defence. He must keep himself in readiness to go into action at any hour of the day or night. Modern weapons have enabled him to do his job far more effectively than ever in the past. In addition to his duties he often has the chance of acting as guide, philosopher and friend to those civilians with whom he comes in contact. He must keep himself at all times keen and efficient, and be calm and resourceful in an emergency. He should indeed have all the qualities of veracity, capacity, sagacity, perspicacity, efficacy and tenacity. What a paragon he must be—and just to hold the rank of private! Such a private would surely get promotion, and might even become a general.

But the G.P. apparently, in spite of possessing all these qualities, is to remain a private all his life; whilst his juniors—perhaps his own children or even grandchildren (who have chosen a more restricted field as specialists) become officers overnight.

No, Sir! We do not want the invidious distinction of 'officers and men' in the medical army, with the G.P. permanently in the lowest rank. Any dividing lines in the medical profession must be vertical and not horizontal ones.

The time is overdue when recognition must be given that General Practice is a specialty itself and the institution made of a 'Diploma in G.P.' without which no one could engage in general practice as a principal. A higher degree should also be instituted.

But the G.P. must bestir himself now while he still has the chance, for the humble private does not have the ear of the generals.

Pte. M.O.

Port Elizabeth.
2 February 1952.

A 'NEW' ANTHELMINTIC

To the Editor: While the announcement of a proprietary anthelmintic for the eradication of various species of tapeworm and other parasites from the human subject is very welcome, it would be interesting to have the manufacturer's statement on the nature of the actual chemical. The advertisement announces the product as 'a recently discovered anthelmintic', and the chemical composition is given as β -phenyl- β -carboxy-(3,5-diiodo-4-hydroxy phenyl) ethane, but this seems to be merely a different way of expressing the chemical composition of Pheniodol which was certainly described by German workers as long as 12 years ago. The composition of Pheniodol is usually rendered as β -(4-hydroxy 2:5-di-iodo-phenyl)- α -phenylpropionic acid, and it is certain that members of the profession would welcome the manufacturer's confirmation that these two compounds are one and the same.

Interested.

4 February 1952.

SENSE, MORE SENSE AND THE MONOSYLLABLE

To the Editor: If *Dazed Physician* has sufficiently recovered I should like to point out (in words of one syllable or baby talk if that will help) that 'the crazy and half-baked ideas which bubble out of some of us' apparently did not produce that 'confused' state in 'all the doctors in the country' which Dr. Freed's letter, admittedly, effected in *Former Laboratory Worker*. This is what I meant by 'experimental verification' in my letter of 29 December in this *Journal*.

Finally, I am sure that Mrs. Annabelle Cohen is in no need of target practice when it comes to the question of whose ocular 'whites' should receive her skilful, well documented and scientifically accurate fire.

M. Glass.

620 Boston House,
Strand Street,
Cape Town.
6 February 1952.

VALUE OF BCG VACCINE

To the Editor: I think that your readers will be interested in what Dr. H. D. Lees, of Philadelphia, writes in the *Journal of the American Medical Association*, 1951, 147, 1756 (29 December) on the subject of BCG vaccine:

'Since the value of BCG vaccine has not as yet been clearly established, various committees and medical groups have recommended that its use be limited to medical and hospital personnel who may have repeated exposure to tuberculosis. It is suggested, also, that the vaccine should not be released for use among the general public. Present methods of preparation of BCG vaccine leave much to be desired. Dubos¹ has found that the numbers of viable organisms injected as an immunizing dose vary many thousandfold under the conditions of present-day practice. The early experimental work in cattle, confirmed quite recently by Medlar,² indicates that vaccinated animals are no more resistant to later infection with virulent tubercle bacilli than are the unvaccinated. de Abreu³ recently reported that in Rio de Janeiro there was a substantial increase in the tuberculosis mortality rate among infants and young children in spite of extensive use of BCG. During the period 1945-1948, the mortality rate among children from 1 to 2 years of age increased 62.5%. During the same period the tuberculosis death rate for all ages showed a significant decrease and especially so in the age group 20 to 40 years. The Council on the Management and Treatment of Diseases of the Chest⁴ of the American College of Chest Physicians issued in January 1951 a report on *The Present Status of Vaccination in Tuberculosis Control Programs*. They say in part: "It must be stated that there is no evidence that meets strict scientific requirements demonstrating that BCG effects the control of tuberculosis, despite the suggestive results of a few studies. Because there is no general agreement among investigators anywhere in the world on such fundamental matters as the preparation of the vaccine, the method of vaccination, what constitutes a successful vaccination, how resulting immunity may be measured or how long such immunity lasts, the procedure would seem to be still in the investigational period."

'We know that primary infection with virulent tubercle bacilli does not confer a high degree of immunity against subsequent infection and disease. It is unreasonable to expect, therefore, that attenuated organisms may be more effective as an immunizing agent. The control of tuberculosis among medical students and nurses presents a formidable problem wherever they may have repeated contacts with patients having the disease in a communicable form. Vaccination with BCG should under no circumstances be employed as a substitute for those measures which have proved so effective in preventing infection with tubercle bacilli.'

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Vaccine(?).

Cape Town.
8 February 1952.

MEDICAL AID SOCIETY FEES

To the Editor: The Editorial on the new tariff of fees for approved Medical Aid Societies that appeared in this *Journal* on 9 February 1952, states that ordinary customary fees should be charged to members of unapproved medical aid societies and concludes as follows: 'It would be regarded as unethical to render services to such patients on any other basis. This matter was discussed in the *Journal* of 15 December 1951, page 940.'

The discussion referred to in the *Journal* of 15 December 1951 did not, in my opinion, specifically state that ordinary

customary fees should be charged to members of unapproved Medical Aid Societies; it merely indicated that one need not be bound by the Medical Aid Societies tariff. Secondly, the question whether it was ethical to charge the standard medical aid tariff to members of unapproved Medical Aid Societies was not discussed. Reference was made to possible agreements between medical practitioners and unapproved Societies 'on some other tariff basis' (i.e. presumably less than the approved Medical Aid Society tariff) as being unethical.

These are important differences between the comments made on page 940 of the *Journal* of 15 December and the Editorial of 9 February. Would you please explain why it should be considered unethical to charge a bank clerk, who is a member of the United Banks Medical Aid Society (an unapproved but reputable society), the approved Medical Aid Society tariff fee for an examination, while it is ethical to charge the same fee for the same examination to a member of an approved Medical Aid Society, when the only difference is that the latter guarantees payment if the member submits the account within 3 months of its being contracted?

Why should the partial guarantee of payment make one's conduct ethical? There is no unconditional guarantee of payment.

Would it not be better to stress the 'economical' aspect of the matter rather than the 'ethical'?

Are we morally justified in exerting economic pressure on a group of people whose average income is £700 per annum by charging ordinary fees at the time when living costs are high?

We all would like to see the Medical Aid Societies who have withdrawn from the agreement with the Medical Association back in the fold of approved societies.

I do not think it would be regarded as a sign of weakness to be considerate to them by charging Medical Aid Society fees until this can be achieved by further negotiation.

C. J. B. Muller.

202 Dumbarton House,
Cape Town.
12 February 1952.

To the Editor: With reference to the remarks of the Medical Secretary appended to the letter from this Council which appeared in your issue of 15 December 1951, my Committee has instructed me to make the following comments.

It was well known to all Medical Aid Societies that the 10% reduction, which took effect from 1 July 1950, was for one year only. The restoration of the 10% to General Practitioners' fees in January 1951 was agreed to by the Medical Aid Societies on representations being made that the fee was inadequate for General Practitioners in the Johannesburg area, some of whom were contracting out of the Tariff. It was the opinion of this Council that it would be unfair to give an increase in fees to any particular section and, after discussions with your Association, the Societies agreed that the 10% be restored throughout the Union. The Societies also agreed to 3 other increases in fees where it was shown that they were inadequate.

Every endeavour was made by this Council to hold a meeting with the Medical Association in time for a new Tariff to be negotiated and to come into operation from 1 July 1951.

At the meeting held on 5 June 1951 the representatives of this Council stressed that they had no mandate, as the Societies had had no time to consider the Tariff submitted at that meeting, having only received copies a few days before. The minutes of that meeting refer to this statement, and also to the fact that a further meeting was to be held in August to give time for various groups of the Medical Association to be consulted regarding their views on the Societies' proposals regarding fees.

No advice was received about the second meeting until a letter was sent by this Council on 8 October 1951 asking when the meeting was to be held. The reply, which was received on 17 October 1951, advised that the meeting was to be held on 2 November 1951. Three days before that meeting, the amended Tariff became available to the Societies.

Delegates from this Council and representatives of Member Societies attended the meeting on 2 November 1951. After

various amendments to the Preamble had been considered, the delegates were informed by the Chairman of the Central Contract Practice Committee that as regards fees, no discussion would be accepted as the Tariff had been approved by Federal Council. The representatives of Member Societies of this Council were deeply concerned with this statement, as previous Tariffs had been the result of agreement between the Medical Association and the Societies.

A number of Societies, for financial reasons, have not accepted the new Tariff. They realize that the doctors will be entitled to charge ordinary fees to members. These Societies will make refunds direct to their members and leave the member to pay the doctor.

The remarks in the last paragraph are surprising in view of the statement so frequently made by the Medical Association that any individual doctor had the right to contract out of the Tariff. If any individual Society should wish to make any arrangements regarding fees, my Committee fails to see why it would be unethical for a doctor to accept a fee lower than that set out in the Tariff.

A. C. Sargeant,
Secretary.

The Southern Council of Medical Aid Societies,
P.O. Box 1019,
Cape Town.
12 February 1952.

[The Medical Secretary comments on both the above letters as follows: The suggestion was made towards the end of last year in a private conversation with persons connected with certain of the Medical Aid Societies no longer classed as 'approved' Societies by the Association, that they would draw up a tariff of their own and submit it to certain doctors, requesting that they should operate on that tariff. This is a procedure which would undoubtedly be condemned by all thinking practitioners, and adherence to any such unauthorized tariff would be considered to be unethical.

What has been pointed out is that the members of such unapproved Societies should be treated as private patients, and here any practitioner has the right to scale his fees down according to the patient's ability to pay. There is no reason why the fees set out in the present Tariff of Fees booklet should not apply to the more poorly paid members of such unapproved Societies by reason of their inadequate means.—Editor.]

PART-TIME DISTRICT SURGEONS

To the Editor: Permit me to echo and endorse most enthusiastically the views expressed by your correspondent on this subject.

A year or so ago there appeared a footnote on the first (advertising) page of the *Journal* to the effect that the Department concerned was being negotiated with. No further information has since been offered.

It is high time that active steps were taken in this matter.

I wish to protest also about the circumstances under which part-time District Surgeons have to perform autopsies upon suspected proved silicotic ex-miners, with no payment for formalin, no provision of containers for viscera, no payment for time spent on the autopsy—sometimes 30 miles away from headquarters over bad country roads taking up to 3-4 hours of time which one could much more profitably spend seeing patients.

Another Part-time District Surgeon
(Cape Province)

12 February 1952.

To the Editor: The remarks and suggestions of Part-Time District Surgeon are long overdue and will have the whole-hearted support of all part-time District Surgeons.

Part-time District Surgeons, particularly in outlying districts, are overworked and inadequately paid. Where roads are bad and garages poor the 1s. per mile does not cover travelling expenses. A salary of £1 per day is above the average and often covers 3 hours work.

In thus underpaying the part-time District Surgeon, the Department of Health is pursuing a policy that defeats its own object. It may lead to degeneration of an already deteriorated service. To mention one instance only: judges in the higher Courts often complain that complete autopsies are not performed. The Department then has to issue circulars pleading with overworked, underpaid and disgruntled District Surgeons to complete autopsies for which no allowance is paid.

In at least one district where the part-time appointment was converted into a full-time District Surgeoncy, the same amount of work is now done by 4 doctors. Two full-time men in place of the one are covering only part of the area which is now managed by two new doctors.

It is high time that salaries and allowances of part-time District Surgeons be reviewed. There is no reason why, at an allowance of 1s. per mile, the salary of the part-time District Surgeon should be less than that of his full-time colleague.

Another Part-time D.S.
(Transvaal)

14 February 1952.

SUBTERTIAN MALARIA ON TROPICAL AERODROMES

To the Editor: In spite of thorough antimalarial measures which have been carried out on most tropical aerodromes subtertian malaria, which steals in like a thief in the night, must be recognized and guarded against; especially is this the case in the many aerodromes in Central Africa where the chief vector—*Anopheles gambiae*—may still manage to survive. It must be remembered that antimalarial measures cannot always be 100% efficient, and this holds good especially for the smaller emergency landing strips. The mosquito net must not be lightly discarded, on the grounds that one cannot take anything for granted where malaria is concerned. This is an attitude which has been stressed for years in a long acquaintance with *Plasmodium falciparum*. There is always a risk that some unheeding, unprotected, and highly susceptible individual may be bitten, not necessarily always at night-time, by some malaria-infected anopheles, with the result that after an interval of 7 to 10 days (sometimes even longer) a period necessary to complete the exo-erythrocytic cycle in the liver, the victim is struck down by fever; and within an amazingly short interval cerebral manifestations may supervene. So dramatic may be the onset, so acute the symptoms, and so sudden the end that treatment should be instituted as soon as is possible without waiting for pernicious symptoms to develop. This aspect has been emphasized again and again; but still it is lamentable to see this severe illness, often after the patient's safe arrival in England, fobbed off as influenza, chill on the liver, or food-poisoning. There is only one diagnosis, and that is subtertian malaria.

Headache, rapid rise of temperature, diarrhoea, and bilious vomiting are very suggestive of this correct diagnosis. Though new and potent antimalarial drugs have been introduced quinine still remains the most powerful weapon in these emergencies. It is essential that this should be more generally recognized.

In severe cases quinine should be injected intramuscularly or intravenously without waiting, sometimes even for days, for the result of microscopic blood examination, especially when this cannot be carried out on the spot. The watchword is urgency. It must be borne in mind, too, that in some of these tragic cases, especially in the early stages, the tell-tale subtertian rings may be difficult to find, as they may be very scarce in the peripheral blood. Often, too, they are of a very small size and of extreme tenuity, which makes them difficult to recognize under the microscope. The guiding motto should be always: 'To be forewarned is to be forearmed.'

Philip Manson-Bahr.

London, W.I.

[This letter was published in the *British Medical Journal* on 20 October 1951 and is reprinted by permission of the author and the Editor of the *British Medical Journal* at the suggestion of the Secretary for Health.—Editor.]

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MEDICAL POSTS IN PUBLIC HOSPITALS (OTHER THAN TEACHING HOSPITALS) MEDIESE POSTE IN PUBLIEKE HOSPITALE (UITGESONDERD ONDERRIG-HOSPITALE)

Applications are invited from duly registered medical practitioners for the posts of part-time medical officers as set out in the schedule hereto.

Applications should be addressed to the Chairman of the Hospital Board concerned in each case so as to reach him not later than 20 March 1952.

Appointments will be subject to the provisions of the Public Hospitals Ordinance 1946, as amended, and to the following special conditions:—

(a) Part-time appointments on the medical staff of hospitals shall be terminable by three months' notice on either side and shall, unless previously terminated, continue for not more than two years, or until the incumbent reaches the age of 60 years, whichever period is the shorter.

(b) The holders of part-time medical appointments shall not be entitled to paid leave of absence, and arrangements shall be made with the Medical Superintendent or Medical Officer-in-Charge, in consultation with the head of the clinical department concerned if any, for the provision of reliefs or locums for part-time medical officers during periods of absence.

(c) The position of Heads of Clinical Departments shall be defined as follows:

The person appointed as Head of a Clinical Department shall be responsible for the general conduct of the Department. He shall be responsible for advising the Board on all matters concerning the Department or its technical equipment, and for the efficient conduct of the out-patient and casualty services of his Department. He shall be available for consultation with the members of the medical staff of the hospital.

(d) Part-time Specialists who are appointed to hospitals outside the municipal area within which their private consulting rooms are situated will be paid transport allowances per session for the purpose of travelling to and from the hospital in their private motor-cars at the rates prevailing in the hospital service.

(e) Where the remuneration set out in the schedule of posts is calculated on a sessional basis, a session shall be regarded as four hours.

Applicants will be expected to assume duty on 1 May 1952, or as soon as possible thereafter.

Applications to be submitted on the official form T.A.633 which is obtainable from any of the hospitals mentioned below or the Secretary, Hospital Services Department, P.O. Box 383, Pretoria.

[SCHEDULE]

BARBERTON HOSPITAL

Four part-time General Practitioners at £680 per annum in respect of 4 sessions per week.

BOKSBURG-BENONI HOSPITAL

Department of Surgery.

One part-time Specialist Surgeon (Head of Department) to attend daily, at £912 per annum (assessed at four sessions per week at £228 per annum).

Three part-time General Practitioner Surgeons to attend daily, at £255 per annum each (assessed at one and a half sessions per week at £170).

Department of Medicine.

One part-time Specialist Physician (Head of Department) to attend daily, at £912 per annum (assessed at four sessions per week at £228 per annum).

Three part-time General Practitioner Physicians to attend daily, at £255 per annum (assessed at one and a half sessions per week at £170 per annum).

Aansoekers deur behoorlik geregistreerde praktiserende geneesheren word hierby ingewag om die poste van deeltydse mediese beamptes soos uiteengesit in die bygaande bylae.

Aansoekers moet in elke geval aan die Voorsitter van die betrokke Hospitaalbestuur gerig word om hom nie later as 20 Maart 1952 te bereik nie.

Deeltydse aanstellings is onderworpe aan die bepalings van die Ordonnansie op Publieke Hospitale, 1946 (soos gewysig) en aan onderstaande spesiale voorwaardes:—

(a) Deeltydse aanstellings in die geneeskundige personeel van hospitale kan beëindig word nadat drie maande kennis deur die een of ander party gegee is en die termyn daarvan, tensy dit vroeër beëindig word, is hoogstens twee jaar of totdat die bekleër die ouderdom van 60 jaar bereik, watter termyn ook al die kortste is.

(b) Die bekleërs van deeltydse geneeskundige poste is nie geregtig tot verlof tot afwesigheid met besoldiging nie, en reëlins moet met die Mediese Superintendent of Verantwoordelike Geneesheer, in oorlegpleging met die hoof van die betrokke kliniese afdeling, indien daar is, getref word vir die voorsiening van plaasvervangers vir deeltydse mediese beamptes gedurende die tydperke van hulle afwesigheid.

(c) Die pos van Hoofde van Kliniese Afdelings word as volg omskryf:—

Die persoon wat as Hoof van 'n Kliniese Afdeling aangestel word is verantwoordelik vir die algemene bestuur van die afdeling. Hy moet die Bestuur van die Hospitaal van raad dien in verband met alle sake wat die afdeling of die tegniese toerusting daarvan aangaan en hy moet die buitepasient- en ongevalledienste van sy afdeling op 'n bekwame wyse bestuur. Hy moet beskikbaar wees vir oorlegpleging met die lede van die geneeskundige personeel van die hospitaal.

(d) Aan deeltydse Spesialiste wat aangestel word by hospitale buite die munisipale gebied waarin hulle private spreekkamers geleë is, word reistoelae per sessie teen die skale wat in die hospitaaldiens van toepassing is, betaal om na en van die hospitaal in hulle private motorkarre te ry.

(e) Waar die besoldiging in die lys van poste uiteengesit, op 'n sessie-basis bereken word, word 'n sessie as 'n tydperk van vier uur beskou.

Daar word verwag dat applikante op 1 Mei 1952, of sodra moontlik daarna, in diens sal tree.

Aansoekers moet ingedien word op die amptelike vorm T.A.633 wat verkrygbaar is van enige van die hospitale hieronder vermeld of die Sekretaris, Departement van Hospitaaldiens, Posbus 383, Pretoria.

[BYLAE]

BARBERTON-HOSPITAAL

Vier deeltydse algemene praktisyne teen £680 per jaar ten opsigte van 4 sessies per week.

BOKSBURG-BENONI-HOSPITAAL

Aansoekers vir ondergenoemde poste word ingewag:

Chirurgiese Departement.

Een deeltydse spesialis chirurg (hoof van departement) om hospitaal daaglik te besoek, teen £912 per jaar (bereken teen vier sessies per week teen £228 per sessie per jaar).

Drie deeltydse algemene praktiserende chirurges om hospitaal daaglik te besoek, teen £255 per jaar elk (bereken teen een-en-n-half sessies per week teen £170 per jaar).

Departement van Medisyne.

Een deeltydse spesialis geneesheer (hoof van departement) om hospitaal daaglik te besoek, teen £912 per jaar (bereken teen vier sessies per week teen £228 per sessie per jaar).

Drie deeltydse algemene praktiserende geneesheren om hospitaal daaglik te besoek, teen £255 per jaar elk (bereken teen een-en-n-half sessies per week teen £170 per jaar).

Department of Gynaecology and Obstetrics.

One part-time Gynaecologist and Obstetrician to attend daily, at £912 per annum (assessed at four sessions per week at £228 per annum).

Two part-time General Practitioners to attend daily, at £255 per annum each (assessed at one and a half sessions per week at £170 per annum).

Department of Orthopaedics.

One part-time Specialist at £615 per annum (assessed at three sessions per week at £205 per annum).

One part-time Assistant Specialist at £510 per annum (assessed at two and a half sessions per week at £205 per annum).

Department of Paediatrics.

One part-time Specialist Paediatrician at £615 per annum (assessed at three sessions per week at £205 per annum).

One part-time General Practitioner to attend daily, at £510 per annum (assessed at three sessions per week at £170 per annum).

Department of Anaesthetics.

Two part-time General Practitioner Anaesthetists at £340 per annum each (assessed at two sessions per week at £170 per annum).

Various Departments.

One part-time Specialist in Physical Medicine at £615 per annum (assessed at three sessions per week at £205 per annum).

One part-time Dermatologist at £205 per annum (one session per week).

One part-time Urologist at £410 per annum (assessed at two sessions per week at £205 per annum).

One part-time Ophthalmologist at £615 per annum (assessed at three sessions per week at £205 per annum).

One part-time Otorhinolaryngologist at £615 per annum (assessed at three sessions per week at £205 per annum).

One part-time Neuropsychiatrist at £205 per annum (one session per week).

DISCOVERERS' MEMORIAL HOSPITAL

One part-time Specialist Surgeon (Head of Department) at £342 per annum (assessed at one and a half sessions per week).

One part-time General Practitioner Surgeon at £255 per annum (assessed at one and a half sessions per week), to attend daily.

One part-time Specialist Physician (Head of Department) at £342 per annum (assessed at one and a half sessions per week).

Two part-time General Practitioner Physicians at £255 per annum (assessed at one and a half sessions per week), to attend daily.

One part-time General Practitioner Orthopaedic Surgeon at £340 per annum (assessed at two sessions per week), to attend daily.

One part-time Specialist Gynaecologist and Obstetrician at £205 per annum (assessed at one session per week).

Two part-time General Practitioner Gynaecologists and Obstetricians at £340 per annum, assessed at two sessions per week, to attend daily.

One part-time Specialist Anaesthetist at £615 per annum (assessed at three sessions per week).

One part-time General Practitioner Anaesthetist at £340 (assessed at two sessions per week), to attend daily.

One part-time Specialist in Physical Medicine at £410 per annum (assessed at two sessions per week).

One part-time Neuropsychiatrist at £205 per annum (assessed at one session per week).

One part-time Otorhinolaryngologist at £410 per annum (assessed at two sessions per week).

One part-time Ophthalmologist at £410 per annum (assessed at two sessions per week).

One part-time Urologist at £205 per annum (assessed at one session per week).

One part-time Dermatologist at £205 per annum (assessed at one session per week).

One part-time Paediatrician at £205 per annum (assessed at one session per week).

One part-time Specialist Orthopaedic Surgeon at £205 per annum (assessed at one session per week).

Ginekologiese en Verloskundige Departement.

Een deeltidse ginekoloog en verloskundige om hospitaal daaglik te besoek, teen £912 per jaar (berekende teen vier sessies per week teen £228 per jaar).

Twee deeltidse algemene praktisyne om hospitaal daaglik te besoek, teen £255 per jaar elk (berekende teen een-en-n-half sessies per week teen £170 per jaar).

Ortopediese Departement.

Een deeltidse spesialis teen £615 per jaar (berekende teen drie sessies per week teen £205 per jaar).

Een deeltidse (assistent) spesialis teen £510 per jaar (berekende teen twee-en-n-half sessies per week teen £205 per jaar).

Paediatrics Departement.

Een deeltidse spesialis teen £615 per jaar (berekende teen drie sessies per week teen £205 per jaar).

Een deeltidse algemene praktisyne om hospitaal daaglik te besoek, teen £510 per jaar (berekende teen drie sessies elk) (berekende teen twee sessies per week teen £170 per jaar).

Narkose.

Twee deeltidse algemene praktisyne teen £340 per jaar elk (berekende teen twee sessies per week teen £170 per jaar).

Verskeie Departemente.

Een spesialis in fisiese medisyne teen £615 per jaar (berekende teen drie sessies per week teen £205 per jaar).

Een dermatoloog teen £205 per jaar (1 sessie per week).

Een uroloog teen £410 per jaar (berekende teen twee sessies per week teen £205 per jaar).

Een oogarts teen £615 per jaar (berekende teen drie sessies per week teen £205 per jaar).

Een otorhinolaryngoloog teen £615 per jaar (berekende teen drie sessies per week teen £205 per jaar).

Een neuro-psigiatr teen £205 per jaar (een sessie per week).

ONTDEKKERS-GEDENKHOOSPITAAL

Een deeltidse spesialis chirurg (hoof van departement) teen £342 per jaar, berekende teen een-en-n-half sessies per week.

Een deeltidse algemene praktiserende chirurg om hospitaal daaglik te besoek, teen £255 per jaar berekende teen een-en-n-half sessies per week.

Een deeltidse spesialis geneesheer (hoof van departement) teen £342 per jaar, berekende teen een-en-n-half sessies per week.

Twee deeltidse algemene praktiserende geneesheer om hospitaal daaglik te besoek, teen £255 per jaar elk, berekende teen een-en-n-half sessies per week.

Een deeltidse algemene praktiserende ortopediese chirurg om hospitaal daaglik te besoek, teen £340 per jaar, berekende teen twee sessies per week.

Een deeltidse spesialis ginekoloog en verloskundige teen £205 per jaar, berekende teen een sessie per week.

Twee deeltidse algemene praktiserende ginekoloog en verloskundiges om hospitaal daaglik te besoek, teen £340 per jaar elk, berekende teen twee sessies per week.

Een deeltidse spesialis narkotiseur teen £615 per jaar, berekende teen drie sessies per week.

Een deeltidse algemene praktiserende narkotiseur om hospitaal daaglik te besoek, teen £340 per jaar, berekende teen twee sessies per week.

Een deeltidse spesialis in fisiese medisyne teen £410 per jaar, berekende teen twee sessies per week.

Een deeltidse neuro-psigiatr teen £205 per jaar, berekende teen een sessie per week.

Een deeltidse otorhinolaryngoloog teen £410 per jaar, berekende teen een sessie per week.

Een deeltidse oogheelkundige teen £410 per jaar, berekende teen twee sessies per week.

Een deeltidse uroloog teen £205 per jaar, berekende teen een sessie per week.

Een deeltidse dermatoloog teen £205 per jaar, berekende teen een sessie per week.

Een deeltidse kinderarts teen £205 per jaar, berekende teen een sessie per week.

Een deeltidse spesialis ortopediese chirurg teen £205 per jaar, berekende teen een sessie per week.

EDENVALE HOSPITAL, P.O. RAEDENE

One part-time Specialist Surgeon (Head of Department) at £684 per annum (assessed at 3 sessions per week at £228 per annum).

One part-time Specialist in Physical Medicine at £684 per annum (assessed at 3 sessions per week at £228 per annum).

One part-time Specialist Ophthalmic Surgeon at £307 10s. per annum (assessed at 1½ sessions per week at £205 per annum).

One part-time Specialist Radiologist at £410 per annum (assessed at two sessions per week at £205 per annum), plus an allowance equal to ½ of the fees actually received in respect of radiological work performed by the incumbent, the allowance not to exceed £85 10s. per month.

One part-time Specialist Gynaecologist at £410 per annum (assessed at two sessions per week at £205 per annum).

One part-time Specialist Paediatrician at £410 per annum (assessed at two sessions per week at £205 per annum).

One part-time Specialist Dermatologist at £102 10s. per annum (assessed at ½ session per week at £205 per annum).

One part-time Specialist Anaesthetist at £410 per annum (assessed at two sessions per week at £205 per annum).

One part-time Aural Surgeon at £307 10s. per annum (assessed at 1½ sessions per week at £205 per annum).

FAR EAST RAND HOSPITAL

Surgical Department.

One part-time Senior Surgeon (Head of Department) to attend daily, at £615 per annum (assessed at 3 sessions per week at £205 per annum) (£684 per annum if a specialist).

Two part-time General Practitioner Surgeons to attend daily, at £510 per annum each (assessed at three sessions per week at £170 per annum).

Department of Medicine.

One part-time Senior Physician (Head of Department) to attend daily at £820 per annum (assessed at four sessions per week at £205 per annum) (£912 per annum if a specialist).

Three part-time General Practitioner Physicians to attend daily, at £680 each (assessed at four sessions per week at £170 per annum).

Gynaecological and Obstetrical Department.

One part-time Gynaecologist and Obstetrician at £410 per annum (assessed at two sessions per week at £205 per annum) (£456 per annum if a specialist).

Two part-time General Practitioners to attend daily at £510 each (assessed at three sessions per week at £170).

Orthopaedic Department.

One part-time Specialist at £510 per annum (assessed at 2½ sessions per week at £205 per annum).

One part-time General Practitioner to attend daily, at £425 per annum (assessed at two and a half sessions per week at £170 per annum).

Paediatric Department.

One part-time Specialist at £510 per annum (assessed at 2½ sessions per week at £205 per annum).

One part-time General Practitioner to attend daily, at £425 per annum (assessed at 2½ sessions per week at £170 per annum).

Anaesthetics.

Three part-time General Practitioners at £340 each (assessed at two sessions per week at £170 per annum).

Various.

One Specialist in Physical Medicine at £205 per annum (assessed at one session per week).

One Dermatologist at £205 per annum (assessed at one session per week).

One Urologist at £205 per annum (assessed at one session per week).

One Ophthalmologist at £205 per annum (assessed at one session per week).

One Otorhinolaryngologist at £410 per annum (assessed at two sessions per week).

One Neuropsychiatrist at £205 per annum (assessed at one session per week).

EDENDALE-HOSPITAAL, PK. RAEDENE

Een deeltijdse spesialis chirurg (hoof van departement) teen £684 per jaar (bereken teen drie sessies per week teen £228 per jaar).

Een deeltijdse spesialis in fisiese medisyne teen £684 per jaar (bereken teen drie sessies per week teen £228 per jaar).

Een deeltijdse spesialis oogarts teen £205 per jaar (bereken teen een sessie per week teen £205 per jaar).

Een deeltijdse spesialis radioloog teen £410 per jaar (bereken teen twee sessies per week teen £205 per jaar), plus 'n toelae gelykstaande aan ½ van die fooie werklik ontvang ten opsigte van radiologiese werk deur bekleër waargeneem. Die toelae moet nie £85 10s. per maand oorskry nie.

Een deeltijdse spesialis verloskundige teen £410 per jaar (bereken teen twee sessies per week teen £205 per jaar).

Een deeltijdse spesialis kinderarts teen £410 per jaar (bereken teen twee sessies per week teen £205 per jaar).

Een deeltijdse spesialis dermatoloog teen £102 10s. per jaar (bereken teen ½ sessie per week teen £205 per jaar).

Een deeltijdse spesialis narkotiseur teen £615 per jaar (bereken teen drie sessies per week teen £205 per jaar).

Een deeltijdse oor-, neus- en keel spesialis teen £307 10s. per jaar (bereken teen een-en-en-half sessies per week teen £205 per jaar).

VERRE OOSRANDSE-HOSPITAAL

Chirurgiese Departement.

Een deeltijdse senior chirurg (hoof van departement) om hospitaal daaglik te besoek, teen £615 per jaar (bereken teen drie sessies per week teen £205 per jaar) (£684 per jaar indien spesialis).

Twee deeltijdse algemene praktiserende chirurges om hospitaal daaglik te besoek, teen £510 per jaar elk (bereken teen drie sessies per week teen £170 per jaar).

Departement van Medisyne.

Een deeltijdse senior geneesheer (hoof van departement) om hospitaal daaglik te besoek, teen £820 per jaar (bereken teen vier sessies per week teen £205 per jaar) (£912 per jaar indien 'n spesialis).

Drie deeltijdse algemene praktiserende geneesheres om hospitaal daaglik te besoek, teen £680 per jaar elk (bereken teen vier sessies per week teen £170 per jaar).

Ginekologiese en Verloskundige Departement.

Een deeltijdse ginekoloog en verloskundige teen £410 per jaar (bereken teen twee sessies per week teen £205 per jaar) (£456 per jaar indien 'n spesialis).

Twee deeltijdse algemene praktisyns om hospitaal daaglik te besoek, teen £510 elk (bereken teen drie sessies per week teen £170 per jaar).

Ortopediese Departement.

Een deeltijdse spesialis teen £510 per jaar (bereken teen 2½ sessies per week teen £205 per jaar).

Een deeltijdse algemene praktisyn om hospitaal daaglik te besoek, teen £425 per jaar (bereken teen 2½ sessies per week teen £170 per jaar).

Paediatriese Departement.

Een deeltijdse spesialis teen £510 per jaar (bereken teen 2½ sessies per week teen £205 per jaar).

Een deeltijdse algemene praktisyn om hospitaal daaglik te besoek, teen £425 per jaar (bereken teen 2½ sessies per week teen £170 per jaar).

Narkose.

Drie deeltijdse algemene praktisyns teen £340 elk (bereken teen twee sessies per week teen £170 per jaar).

Verkeie.

Een spesialis in fisiese medisyne teen £205 per jaar (een sessie per week).

Een dermatoloog teen £205 per jaar (bereken teen een sessie per week).

Een uroloog teen £205 per jaar (bereken teen een sessie per week).

Een oogarts teen £205 per jaar (bereken teen een sessie per week).

Een otorhinolaryngoloog teen £410 per jaar (bereken teen twee sessies per week).

Een neuro-psigiatr teen £205 per jaar (bereken teen een sessie per week).

GERMISTON HOSPITAL

One part-time Specialist Surgeon (Head of Department) to attend daily, at £1,140 per annum, in respect of five sessions per week.

Three part-time General Practitioner Surgeons to attend daily, at £510 per annum each, in respect of three sessions per week.

One part-time Specialist Physician (Head of Department) to attend daily, at £1,140 per annum, in respect of five sessions per week.

Three part-time General Practitioner Physicians to attend daily, at £510 per annum, in respect of three sessions per week.

One part-time Specialist in Gynaecology and Obstetrics at £410 per annum, in respect of two sessions per week.

Two part-time General Practitioner Gynaecologists and Obstetricians to attend daily, at £340 per annum, in respect of two sessions per week.

One part-time (Assistant) Orthopaedic Specialist at £615 per annum, in respect of three sessions per week.

One part-time (Assistant) Orthopaedic Specialist at £512 10s. per annum, in respect of 2½ sessions per week.

One part-time Specialist Paediatrician at £615 per annum, in respect of three sessions per week.

One part-time Otorhinolaryngologist (E.N.T.) at £410 per annum, in respect of two sessions per week.

One part-time Specialist Ophthalmologist at £410 per annum, in respect of two sessions per week.

One part-time Specialist Anaesthetist at £820 per annum, in respect of four sessions per week.

Two part-time General Practitioner Anaesthetists to attend daily, at £680 per annum, in respect of four sessions per week.

One part-time Specialist in Physical Medicine at £410 per annum, in respect of two sessions per week.

One part-time Dermatologist at £410 per annum, in respect of two sessions per week.

One part-time Urologist at £410 per annum, in respect of two sessions per week.

One part-time Neuropsychiatrist at £205 per annum, in respect of one session per week.

HEIDELBERG HOSPITAL

Two General Practitioners at £510 per annum, in respect of three sessions per week.

One part-time General Practitioner Anaesthetist at £340 per annum, in respect of two sessions per week.

KLERKSDORP HOSPITAL

One part-time General Practitioner Surgeon to attend the hospital daily, with salary at the rate of £340 per annum (assessed at two sessions per week at £170 per annum).

One part-time General Practitioner Physician (charge of department) to attend the hospital daily, with salary at £410 per annum (assessed at two sessions per week at £205 per annum).

Two part-time General Practitioner Physicians to attend the hospital daily, with salary at £340 per annum each (assessed at two sessions per week at £170 per annum).

One part-time General Practitioner Anaesthetist to undertake all anaesthetics for 'hospital' patients, on basis of rotating duties and being available for emergencies, with salary at £425 per annum (assessed at two and a half sessions per week at £170 per annum).

One part-time General Practitioner in Ophthalmology at ½ session per week, at £85 per annum.

KRUGERSDORP HOSPITAL

Surgical Department.

One part-time Specialist Surgeon (Head of Department) to attend daily, at £684 per annum (assessed at three sessions per week at £228 per annum).

Two part-time General Practitioner Surgeons to attend daily, at £510 per annum each (assessed at three sessions per week at £170 per annum).

Department of Medicine.

One part-time Specialist Physician (Head of Department) to attend daily, at £684 per annum (assessed at three sessions per week at £228 per annum).

GERMISTON-HOSPITAAL

Een deeltidse spesialis chirurg (hoof van departement) om hospitaal daaglik te besoek, teen £1,140 per jaar, ten opsigte van vyf sessies per week.

Drie deeltidse algemene praktiserende chirurges om hospitaal daaglik te besoek, teen £510 per jaar, ten opsigte van drie sessies per week.

Een deeltidse spesialis geneesheer (hoof van departement) om hospitaal daaglik te besoek, teen £1,140 per jaar, ten opsigte van vyf sessies per week.

Drie deeltidse algemene praktiserende geneesherre om hospitaal daaglik te besoek, teen £510 per jaar ten opsigte van drie sessies per week.

Een deeltidse spesialis in ginekologie en verloskunde teen £410 per jaar, ten opsigte van twee sessies per week.

Twee deeltidse algemene praktisyne in ginekologie en verloskunde om hospitaal daaglik te besoek, ten opsigte van twee sessies per week, teen £340 per jaar.

Een deeltidse (assistent) spesialis in ortopedie teen £615 per jaar, ten opsigte van een sessie per week.

Een deeltidse (assistent) spesialis in ortopedie teen £512 10s. per jaar ten opsigte van 2½ sessies per week.

Een deeltidse spesialis kinderarts teen £615 per jaar, ten opsigte van drie sessies per week.

Een deeltidse spesialis otorhinolaringoloog teen £410 per jaar, ten opsigte van drie sessies per week.

Een deeltidse oogheelkundige teen £410 per jaar, ten opsigte van twee sessies per week.

Een deeltidse spesialis narkotiseur teen £820 per jaar, ten opsigte van vier sessies per week.

Twee deeltidse algemene praktiserende narkotiseurs om hospitaal daaglik te besoek, teen £680 per jaar, ten opsigte van vier sessies per week.

Een spesialis in fisiese medisyne teen £410 per jaar, ten opsigte van twee sessies per week.

Een deeltidse dermatoloog teen £410 per jaar, ten opsigte van twee sessies per week.

Een deeltidse uroloog teen £410 per jaar ten opsigte van twee sessies per week.

Een deeltidse neuro-psigiatr teen £205 per jaar, ten opsigte van een sessie per week.

HEIDELBERGSE HOSPITAAL

Twee deeltidse algemene praktisyne teen £510 per jaar, ten opsigte van drie sessies per week.

Een deeltidse algemene praktiserende narkotiseur teen £340 per jaar, ten opsigte van twee sessies per week.

KLERKSDORPSE HOSPITAAL

Een deeltidse algemene praktiserende chirurg om hospitaal daaglik te besoek, met salaris van £340 per jaar (berekende teen twee sessies per week teen £170 per jaar).

Een deeltidse algemene praktiserende geneesheer (in beheer van departement) om hospitaal daaglik te besoek, teen 'n salaris van £410 per jaar (berekende teen twee sessies per week teen £205 per jaar).

Twee deeltidse algemene praktiserende geneesherre om hospitaal daaglik te besoek, met salaris van £340 per jaar elk (berekende teen twee sessies per week teen £170 per jaar).

Een deeltidse algemene praktiserende narkotiseur om alle narkose-dienste vir hospitaalspasiente te help doen op grondslag dat dienste roteer en beskikbaar is in noodgevalle. Salaris £425 per jaar (berekende teen twee-en-n-half sessies per week teen £170 per jaar).

Een deeltidse algemene praktisyne in oogheelkunde teen £85 per jaar ten opsigte van ½ sessie per week.

KRUGERSDORP-HOSPITAAL

Chirurgiese Departement.

Een deeltidse spesiale chirurg (hoof van departement) om hospitaal daaglik te besoek, teen £684 per jaar (berekende teen drie sessies per week teen £228 per jaar).

Twee deeltidse algemene praktiserende chirurges om hospitaal daaglik te besoek, teen £510 per jaar elk (berekende teen drie sessies per week teen £170 per jaar).

Departement van Medisyne.

Een deeltidse spesialis geneesheer (hoof van departement) om hospitaal daaglik te besoek teen £684 per jaar (berekende teen drie sessies per week teen £228 per jaar).

Two part-time General Practitioner Physicians to attend daily, at £510 per annum each (assessed at three sessions per week at £170 per annum).

Gynaecological and Obstetrical Department.

One part-time Specialist at £615 per annum (assessed at three sessions per week at £205 per annum).

One part-time General Practitioner to attend daily at £510 per annum (assessed at three sessions per week at £170 per annum).

Anaesthetics.

One part-time Specialist Anaesthetist at £820 per annum (assessed at four sessions per week at £205 per annum).

Two part-time General Practitioner Anaesthetists at £340 each (assessed at two sessions per week at £170 per annum).

Paediatric Department.

One part-time Specialist at £410 per annum (assessed at two sessions per week at £205 per annum).

One part-time General Practitioner to attend daily, at £340 per annum (assessed at two sessions per week at £170 per annum).

Various.

One Dermatologist at £205 per annum (one session per week).

One Specialist in Physical Medicine at £410 per annum (two sessions per week).

One Urologist at £410 per annum (two sessions per week).

One Otorhinolaryngologist at £410 per annum (two sessions per week).

LICHTENBURG HOSPITAL

One part-time General Practitioner to visit the hospital daily, at £340 per annum (assessed at two sessions per week), plus an allowance of £100 per annum for administrative duties.

Three part-time General Practitioners at £340 per annum, in respect of two sessions per week.

LOUIS TRICHARDT MEMORIAL HOSPITAL

Two part-time medical officers to attend the hospital daily, at £100 per annum.

One part-time medical officer to attend the hospital daily, at £100 per annum, plus £30 per annum for administrative duties.

LYDENBURG HOSPITAL

Two part-time General Practitioners to attend daily, at £510 per annum each (assessed at three sessions per week at £170 per annum).

MEERHOF CHILDREN'S HOSPITAL, PRETORIA

One part-time Medical Officer-in-Charge at £425 per annum (assessed at 2½ sessions per week), plus an allowance of £60 per annum for administrative duties.

MIDDELBURG HOSPITAL

One part-time General Practitioner Surgeon to attend daily (Head of Department), at £820 per annum (assessed at four sessions per week at £205 per annum).

One part-time General Practitioner to attend daily at £680 per annum (assessed at four sessions per week at £170 per annum).

NIGEL HOSPITAL

One part-time Specialist in Physical Medicine at £205 per annum, in respect of one session per week.

Five part-time Medical Officers at £272 per annum, in respect of 1½ session per week at £170 per session per annum.

PAUL KRUGER MEMORIAL HOSPITAL, RUSTENBURG

One part-time General Practitioner Surgeon (Head of Department) to attend daily, with salary at £615 per annum (assessed at three sessions per week at £205 per annum).

One part-time Anaesthetist to undertake all anaesthetic

Two deeltydse algemene praktiserende geneesherre om hospitaal daaglik te besoek teen £510 per jaar elk (bereken teen drie sessies per week teen £170 per jaar).

Ginekologiese en Verloskundige Departement.

Een deeltydse spesialis teen £615 per jaar (bereken teen drie sessies per week teen £205 per jaar).

Een deeltydse algemene praktisyn om hospitaal daaglik te besoek, teen £510 per jaar (bereken teen drie sessies per week teen £170 per jaar).

Narkose.

Een deeltydse algemene praktiserende narkotiseur teen £680 per jaar (bereken teen vier sessies per week teen £170 per jaar).

Twee deeltydse algemene praktiserende narkotiseurs teen £340 per jaar elk (bereken teen twee sessies per week teen £170 per jaar).

Paediatrisse Departement.

Een deeltydse spesialis teen £410 per jaar (bereken teen twee sessies per week teen £205 per jaar).

Een deeltydse algemene praktisyn om hospitaal daaglik te besoek, teen £340 per jaar (bereken teen twee sessies per week teen £170 per jaar).

Verskeie.

Een spesialis in fisiese medisyne teen £410 per jaar (twee sessies per week).

Een dermatoloog teen £205 per jaar (een sessie per week).

Een uroloog teen £410 per jaar (twee sessies per week).

Een otorhinolaringoloog teen £410 per jaar (twee sessies per week).

LICHTENBURGSE HOSPITAAL

Een deeltydse algemene praktisyn om hospitaal daaglik te besoek, teen £340 per jaar (bereken teen twee sessies per week), plus 'n toelaag van £100 per jaar vir administratiewe dienste.

Drie algemene praktisyns teen £340 per jaar, ten opsigte van twee sessies per week.

LOUIS TRICHARDT GEDENK-HOSPITAAL

Een deeltydse mediese beampte om die hospitaal daaglik te besoek, teen £100 per jaar, plus £50 per jaar vir administratiewe dienste.

Twee deeltydse mediese beamptes om die hospitaal daaglik te besoek, teen £100 per jaar.

LYDENBURG-HOSPITAAL

Twee deeltydse algemene praktisyns om hospitaal daaglik te besoek, teen £510 elk (bereken teen drie sessies per week teen £170 per jaar).

MEERHOF KINDERHOSPITAAL, PRETORIA

Een deeltydse verantwoordelike geneesheer teen £425 per jaar (bereken teen 2½ sessies per week), plus 'n toelaag van £60 per jaar vir administratiewe dienste.

MIDDELBURG-HOSPITAAL

Een deeltydse algemene praktisyn chirurg (hoof van die departement) teen £820 per jaar om daaglik die hospitaal te besoek op 'n basis van vier sessies per week, teen £205 per sessie per jaar.

Een deeltydse algemene praktisyn teen £680 per jaar om daaglik die hospitaal te besoek, op 'n basis van vier sessies per week teen £170 per sessie per jaar.

NIGEL-HOSPITAAL

Een deeltydse spesialis in fisiese geneeskunde teen £205 per jaar, ten opsigte van een sessie per week.

Vyf deeltydse mediese beamptes teen £272 per jaar, ten opsigte van 1½ sessie per week elk teen £170 per sessie per jaar.

PAUL KRUGER GEDENK-HOSPITAAL, RUSTENBURG

Een deeltydse algemene praktiserende chirurg (hoof van departement) om hospitaal daaglik te besoek, teen 'n salaris van £615 per jaar (bereken teen drie sessies per week teen £205 per jaar).

Een deeltydse algemene praktiserende narkotiseur om alle narkose-dienste van 'hospitaalsasiënte' waar te neem teen 'n

duties for 'hospital patients', with salary at £340 per annum (assessed at two sessions per week at £170 per annum).

Two part-time General Practitioner Physicians to attend daily, with salary at £170 each (assessed at one session per week).

PIETERSBURG HOSPITAL

Two part-time General Practitioner Physicians to visit the hospital daily, at £340 per annum each (assessed at two sessions per week at £170 per annum).

One part-time General Practitioner Surgeon to attend daily, at £680 per annum (assessed at four sessions per week at £170 per annum).

One part-time Specialist Surgeon to attend daily, at £912 per annum (assessed at four sessions per week at £228 per annum).

PIET RETIEF HOSPITAL

Two part-time General Practitioners at £340 per annum (assessed at two sessions per week at £170 per session per annum).

POTCHEFSTROOM HOSPITAL

One part-time General Practitioner Physician at £425 per annum in respect of 2½ sessions per week.

Two part-time General Practitioner Surgeons at £425 per annum, in respect of 2½ sessions per week.

Two part-time General Practitioner Anaesthetists at £340 per annum in respect of 2½ sessions per week.

POTGIETERSRUST HOSPITAL

One part-time General Practitioner to visit the hospital daily, with salary at £510 per annum (assessed at three sessions per week at £170 per session per annum).

SABIE HOSPITAL

One part-time Medical Officer-in-Charge to visit the hospital daily, at £850 per annum (assessed at five sessions per week), plus an allowance of £100 per annum for administrative duties.

One part-time General Practitioner Anaesthetist at £255 per annum, in respect of 1½ sessions per week.

SCHWEIZER-RENEKE HOSPITAL

Three part-time General Practitioners to attend daily and undertake duties in rotation, at £170 per annum each (assessed at one session per week), with an allowance of £100 per annum to one of them as part-time Medical Officer-in-Charge.

STANDERTON HOSPITAL

Three part-time Medical Officers to attend daily at £510 per annum each (assessed at three sessions per week at £170 per annum).

VENTERSDORP-HOSPITAAL

One part-time Medical Officer-in-Charge at £340 per annum (assessed at two sessions per week at £170), plus an allowance of £100 per annum for administrative duties.

Three part-time General Practitioners at £340 per annum, in respect of two sessions per week.

VEREENIGING HOSPITAL

One part-time Neuropsychiatrist at £205 per annum, in respect of one session per week.

One part-time Ophthalmologist at £205 per annum, in respect of one session per week.

One part-time Urologist at £205 per annum, in respect of one session per week.

One part-time Dermatologist at £205 per annum, in respect of one session per week.

One part-time Specialist in Physical Medicine at £205 per annum, in respect of one session per week.

Two part-time General Practitioner Anaesthetists at £425 per annum, in respect of 2½ sessions per week.

One part-time Orthopaedic Specialist at £205 per annum, in respect of one session per week.

Two part-time General Practitioner Physicians at £425 per annum, in respect of 2½ sessions per week.

salarijs van £340 per jaar (bereken teen twee sessies per week teen £170 per jaar).

Twee deeltydse algemene praktiserende geneeshere om hospitaal daaglik te besoek, teen 'n salaris van £170 per jaar elk (bereken teen een sessie per week).

PIETERSBURG-HOSPITAAL

Twee deeltydse algemene praktiserende geneeshere om die hospitaal daaglik te besoek, teen £340 per jaar elk (bereken teen 2 sessies per week teen £170 per jaar).

Een deeltydse algemene praktiserende chirurg om die hospitaal daaglik te besoek, teen £680 per jaar (bereken teen vier sessies per week teen £170 per jaar).

Een deeltydse spesialis chirurg om die hospitaal daaglik te besoek, teen £912 per jaar (bereken teen vier sessies per week teen £228 per jaar).

PIET RETIEF-HOSPITAAL

Twee deeltydse algemene praktisyns teen £340 per jaar (bereken teen twee sessies per week teen £170 per sessie per jaar).

POTCHEFSTROOM-HOSPITAAL

Een deeltydse algemene praktiserende geneesheer teen £425 per jaar, ten opsigte van 2½ sessies per week.

Twee deeltydse algemene praktiserende chirurgie teen £425 per jaar elk ten opsigte van 2½ sessies per week.

Twee deeltydse algemene praktiserende narkotiseurs teen £340 per jaar elk, ten opsigte van twee sessies per week.

POTGIETERSRUST-HOSPITAAL

Een deeltydse algemene praktisyn om hospitaal daaglik te besoek, teen salaris van £510 per jaar (ten opsigte van drie sessies per week teen £170 per sessie per jaar).

SABIE-HOSPITAAL

Een verantwoordelike geneesheer om hospitaal daaglik te besoek, teen £850 per jaar (bereken teen vyf sessies per week), plus £100 toelaag per jaar vir administratiewe dienste (deeltydse).

Een deeltydse algemene praktisyn narkotiseur teen £255 per jaar (bereken teen 1½ sessies per week).

SCHWEIZER-RENEKE HOSPITAL

Drie deeltydse algemene praktisyns om die hospitaal daaglik te besoek, in rotasie, teen £170 per jaar elk (bereken teen een sessie per week), plus 'n toelaag van £100 per jaar aan een, vir dienste as deeltydse verantwoordelike geneesheer.

STANDERTON-HOSPITAAL

Drie deeltydse mediese beamptes om hospitaal daaglik te besoek, teen £510 per jaar elk (bereken teen drie sessies per week teen £170 per jaar).

VENTERSDORP-HOSPITAAL

Een deeltydse verantwoordelike geneesheer teen £340 per jaar (bereken teen twee sessies per week teen £170 per jaar), plus 'n toelaag van £100 per jaar vir administratiewe dienste.

Drie deeltydse algemene praktisyns teen £340 per jaar, ten opsigte van twee sessies per week.

VEREENIGING-HOSPITAAL

Een deeltydse neuro-psigiater teen £205 per jaar, ten opsigte van een sessie per week.

Een deeltydse oogarts teen £205 per jaar, ten opsigte van een sessie per week.

Een deeltydse uroloog teen £205 per jaar, ten opsigte van een sessie per week.

Een deeltydse dermatoloog teen £205 per jaar, ten opsigte van een sessie per week.

Een deeltydse spesialis in fisiese medisyne teen £205 per jaar, ten opsigte van een sessie per week.

Twee deeltydse algemene praktiserende narkotiseurs teen £425 per jaar, ten opsigte van 2½ sessies per week.

Een deeltydse ortopediese spesialis teen £205 per jaar ten opsigte van een sessie per week.

Twee deeltydse algemene praktiserende geneeshere teen £425 per jaar, ten opsigte van 2½ sessies per week.

Four part-time General Practitioner Surgeons at £225 per annum, in respect of 1½ sessions per week.

One part-time Senior Surgeon at £615 per annum, in respect of three sessions per week.

One part-time Senior Physician at £615 per annum, in respect of three sessions per week.

VOLKSRUST HOSPITAL

Three part-time General Practitioners at £340 per annum (assessed at two sessions at £170 per session), plus an allowance of £100 per annum to one of them as part-time Medical Officer-in-Charge.

WITBANK HOSPITAL

Four part-time General Medical Practitioners at £510 per annum, in respect of three sessions per week.

WOLMARANSSTAD HOSPITAL

Three part-time General Practitioners to attend at the hospital daily, with salary at the rate of £765 per annum each (assessed at 4½ sessions per week), plus an allowance of £100 per annum to one of them as part-time Medical Officer-in-Charge.

Vier deeltydse algemene praktiserende chirurgie teen £255 per jaar, ten opsigte van 1½ sessies per week.

Een deeltydse senior chirurg teen £615 per jaar, ten opsigte van drie sessies per week.

Een deeltydse senior geneesheer teen £615 per jaar ten opsigte van drie sessies per week.

VOLKSRUST-HOSPITAAL

Drie deeltydse algemene praktisyne teen £340 per jaar (berekende teen twee sessies teen £170 per sessie), plus £100 per jaar toelae aan een vir dienste as deeltydse verantwoordelike geneesheer.

WITBANK-HOSPITAAL

Vier deeltydse algemene mediese praktisyne teen £510 per jaar, ten opsigte van drie sessies per week.

WOLMARANSSTAD-HOSPITAAL

Drie deeltydse algemene praktisyne om die hospitaal daaglik te besoek teen £765 per jaar elk (berekende teen 4½ sessies per week), plus 'n toelae van £100 per jaar aan een vir dienste as deeltydse verantwoordelike geneesheer.

34050

The Medical Association of South Africa Die Mediese Vereniging van Suid-Afrika

AGENCY DEPARTMENT : AGENTSAP AFDELING

KAAPSTAD : CAPE TOWN

Posbus 643, Telefoon 2-6177 : P.O. Box 643, Telefoon 2-6177

PRAKTYKE TE KOOP : PRACTICES FOR SALE

(974) Western Cape. Unopposed solus dispensing practice with four appointments. Gross annual receipts, £4,300. Premium of £3,000 required, includes surgery furniture, drugs and transference of the appointments. Modern 12-roomed d/s house for sale at £5,000. Bond available for £3,200.

(972) Eastern Province hospital town. Average gross annual receipts, £4,100. Some dispensing done. Premium required £2,800, which includes drugs, surgery furniture, waiting-room furniture and most instruments. House for sale at £2,000 for which terms could be arranged. Pleasant district.

(975) Cape Midlands hospital town. Well-established solus practice especially suitable for man whose wife is a doctor too. Average annual receipts, £3,100. Three appointments held. Premium required £3,000, which includes drugs, surgery fittings, curtains, linen, furniture and all instruments. Terms could be arranged. House for sale at £3,000.

VENNOOTSAP VERLANG : PARTNERSHIP REQUIRED

(811) Partnership share in Cape or Natal in predominantly English-speaking practice with min. net income £2,500 p.a.

(973) Doctor, ex-R.A.M.C., F.R.C.S. (Eng., 1938), requires practice or partnership in hospital town with scope for surgery.

MEDICAL EQUIPMENT FOR SALE

(772) Strand, C.P. Instrument cabinet, dressing trolley, screen, writing desk.

Cape Town. Neville Barnes' Axistraction obstetric forceps, chrome-plated, £6; pelvimeter, £1; etc.

(674) Becker Microscope in good order, with oil immersion lens. Edroy Magni-Focuser. *British Encyclopaedia of Medical Practice*.

(925) Baumanometer, £7. Forceps, clinical thermometers, dilators, catheters, etc.

(750) Electrocardiograph. Sanborne Cardiette. Weight 24 lb. Perfect working condition. Used by Cape Town specialist physician. £160 or nearest offer.

(878) White wooden cabinet for surgery. Five feet high. Top half glass doors and shelves. £23 10s.

(909) Slit Nitra Lamp (Graf. Gullstrand's). Good working order. £20 or nearest offer.

(961) Minnilt Gas and Air Apparatus. Practically new. £20.

JOHANNESBURG

Medical House, 5 Esselen Street. Telephone 44-9134-5, 44-0817
Mediese Huis, Esselenstraat 5. Telefoon 44-9134-5, 44-0817

ASSISTENTE/PLAASVERVANGERS VERLANG ASSISTANTS/LOCUMS REQUIRED

(L/V186) Natal. For month of April. £2 2s. p.d. all found and car allowance.

(L/V187) O.V.S. Plaasvervanger vanaf 26 Maart tot 18 April. Salaris £2 2s. p.d., alles vry en kartoele van £10 p.m.

(L/V190) O.F.S. Locum for two months from 15 March to 15 May 1952. Salary £2 2s. p.d., all found, free petrol and oil, plus car allowance.

CONSULTING ROOMS TO LET

(R/01) Johannesburg Central. Furnished consulting rooms with services of receptionist, from 1 March 1952, for a period of 10 months to one year.

(R/02) Johannesburg Central. One very big room. Share waiting room and office. Preferably G.P.

National Hospital, Bloemfontein

PART-TIME MEDICAL, SURGICAL AND DENTAL STAFF

Applications are invited from duly qualified and registered medical practitioners and dentists for the following vacancies at the National Hospital and Provincial Hospital, Tempe, Bloemfontein:

Surgeons	3
Gynaecologist-Obstetrician	1
Assistant Gynaecologist-Obstetrician	1
Obstetrician	1
Physician	4
Paediatrician	1
Ear, Nose and Throat Surgeons	2
Ophthalmologists	2
Dentists	3
Out-Patients Medical Officer	1
Pathologist	1
Psychiatrist	1
Dermatologist	1

Applications containing particulars, qualifications, etc., and date of birth must reach the undersigned not later than Tuesday, 18 March 1952.

J. W. Wessels

Medical Superintendent
(Z 204575)

8 February 1952

Services Offered

Doctor and wife (trained nurse) proceeding United Kingdom between April and June 1952, willing to look after invalid on voyage. For further particulars write to 'A. K. J.', P.O. Box 643, Cape Town.

Vacant District Surgeoncies

Applications for the undermentioned District Surgeoncies, accompanied by full particulars as to date and country of birth, qualifications, experience and previous and present appointments of the applicants and the earliest date on which they can assume duty, if appointed, should reach the Secretary for Health, P.O. Box 386, Pretoria, not later than 27 March 1952. Testimonials (copies) may be submitted, but the Minister of Health wishes it to be known that any candidate will be regarded as disqualified who directly or indirectly canvasses for appointment.

The appointments are on a part-time basis and private practice is not precluded.

Applicants should state whether they have a knowledge of both official languages, also whether they are competent to diagnose leprosy and venereal diseases and to use the modern intravenous and other therapeutic technique in the treatment of venereal disease. Applicants should also state whether they have any experience as a medical officer of health or in any similar capacity. If more than one post is applied for, a separate application should be submitted in respect of each:—

Place	Salary Per Annum	Drug Allowance Per Annum
Cape Province		
Cianwilliam	250	60
Robertson	200	20
Darling (Malmesbury)	150	15
Aliwal North	400	75
Britstown	450	75
Orange Free State		
Luckhoff	240	35
Koffiefontein	400	80
Transvaal		
Kempton Park	200	•
Alldays (Zoutpansberg)	350	25
Philadelphia	225	30
Paardekop	220	25
Bloemhof	300	40
Natal		
Mooi River	200	15
Kranskop	350	35

* Drugs supplied under contract.

The salaries cover all ordinary and routine services but travelling allowance of 1s. per mile for all mileage travelled outside a radius of three miles from headquarters, night detention at 15s. and supplementary fees for certain other services will be payable. Also fees for attendance at courts and inquests in accordance with the tariff of the Department of Justice.

Forms of application and copy of draft agreement will be furnished on application. 34037

Cape Provincial Administration

HOSPITALS DEPARTMENT

VACANCIES: HONORARY MEDICAL STAFF

Applications are invited from registered medical practitioners under the age of 60 years for appointment to the following posts on the honorary staff of the Provincial Hospital, Port Elizabeth:—

Senior Surgeon to the Department of Gynaecology and Obstetrics (2 posts).

The appointments are subject to the Hospitals Ordinance No. 18 of 1946 (Cape), as amended, and to the rules and regulations of the Department.

Applications containing full particulars of qualifications, etc., must be addressed to the Medical Superintendent of the Provincial Hospital, Port Elizabeth, to reach his office not later than 29 March 1952.

C. G. Keyter
Branch Representative
2393

Cuthbert's Building
P.O. Box 80
Port Elizabeth
19 February 1952

Natal Provincial Administration

VACANCIES: VISITING STAFF: ADDINGTON AND KING EDWARD VIII HOSPITALS, DURBAN

Applications are invited for appointment to the posts mentioned:—

(1) Assistant Visiting Surgeon, King Edward VIII Hospital. Honorarium £250 per annum, plus emoluments of £150 per annum.

(2) Visiting Surgical Registrar, Addington Hospital. Honorarium £250 per annum, plus emoluments of £150 per annum.

Canvassing of members of any Provincial or Hospital Committee will disqualify candidates.

Applications should be addressed to the Director of Provincial Medical and Health Services, P.O. Box 20, Pietermaritzburg, to reach him not later than 15 March 1952.

P.U.T. Co. Staff Sick Fund

Part-time dental surgeon is required by the above Sick Fund. Full particulars will be supplied to *bona fide* applicants. Applications to be addressed to the Secretary, P.U.T. Co. Staff Sick Fund, P.O. Bramley, Johannesburg, and envelopes should be marked 'Dental Surgeon'.

Locum Wanted

At Taumeb Mine Hospital, South West Africa, for the period 2 May to 4 June 1952. Remuneration three guineas per day all found. Return air fare to Windhoek and air or bus fare from Windhoek to Taumeb will be refunded. Apply Senior Medical Officer, Taumeb Hospital, Taumeb, South West Africa.

R

DIPENICILLIN LEO

Aqueous suspension

High initial concentration

Protracted effect

This combination is now the generally accepted method of administering Penicillin.



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(A)

Desoxyn

HYDROCHLORIDE

*Methamphetamine
Hydrochloride, Abbott*
**tablets,
elixir and
ampoules**

Indications

Desoxyn Hydrochloride is indicated for oral administration in the treatment of narcolepsy, in cases of mild depression and for temporary use as a mental stimulant, where valid indications are present.

Favourable results have also been reported following the use of d-desoxyephedrine hydrochloride as an adjunct in the treatment of postencephalitic Parkinson's syndrome, chronic alcoholism, cerebral arteriosclerosis and generally in conditions for which amphetamine sulfate has been of benefit.

LONGER EFFECT

Average duration of action on oral dose of 25 mg. is 6 to 12 hours, with up to 24 hours reported. Following parenteral administration to maintain blood pressure during and after surgery, satisfactory levels usually are maintained several hours.

FEWER SIDE-EFFECTS

Recommended dosage may cause undesirable reactions. If side-effects do occur, the dose may be reduced, or the drug withdrawn and then readministered as a sedative. While it is not habit-forming, its use should not be used over prolonged periods as a substitute for sleep and rest.

QUICKER ACTION

Oral absorption provides stimulant effect in 10 to 30 minutes following oral dosage. Intravenously, DESOXYN produces a rise in systolic pressure almost at once, maximum effect in 5 to 3 minutes. Intramuscular injection results in a rise in 5 to 10 minutes, with maximum effect in 4 to 20.

SMALLER DOSEAGE

Desoxyn generally by weight means that a smaller dose may be used—from 2.5 to 10 mg. daily for oral administration is usually sufficient. In emergencies, 10 to 15 mg. may be given intravenously for non-emergency use, 15 to 30 mg. intramuscularly, depending on condition of the patient.

How supplied

Desoxyn Hydrochloride Tablets,
2.5 mg. are supplied in bottles of 25 and 100 (List No. 3488).

Desoxyn Hydrochloride Elixir,
containing 20 mg. per fluidounce (2.5 mg. per fluidrachm), is supplied in bottles of 1 pint (List No. 3703).

Desoxyn Hydrochloride Ampoules,
20 mg. per c.c. are supplied in 1-c.c. size, in boxes of 6 (List No. 3378).



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